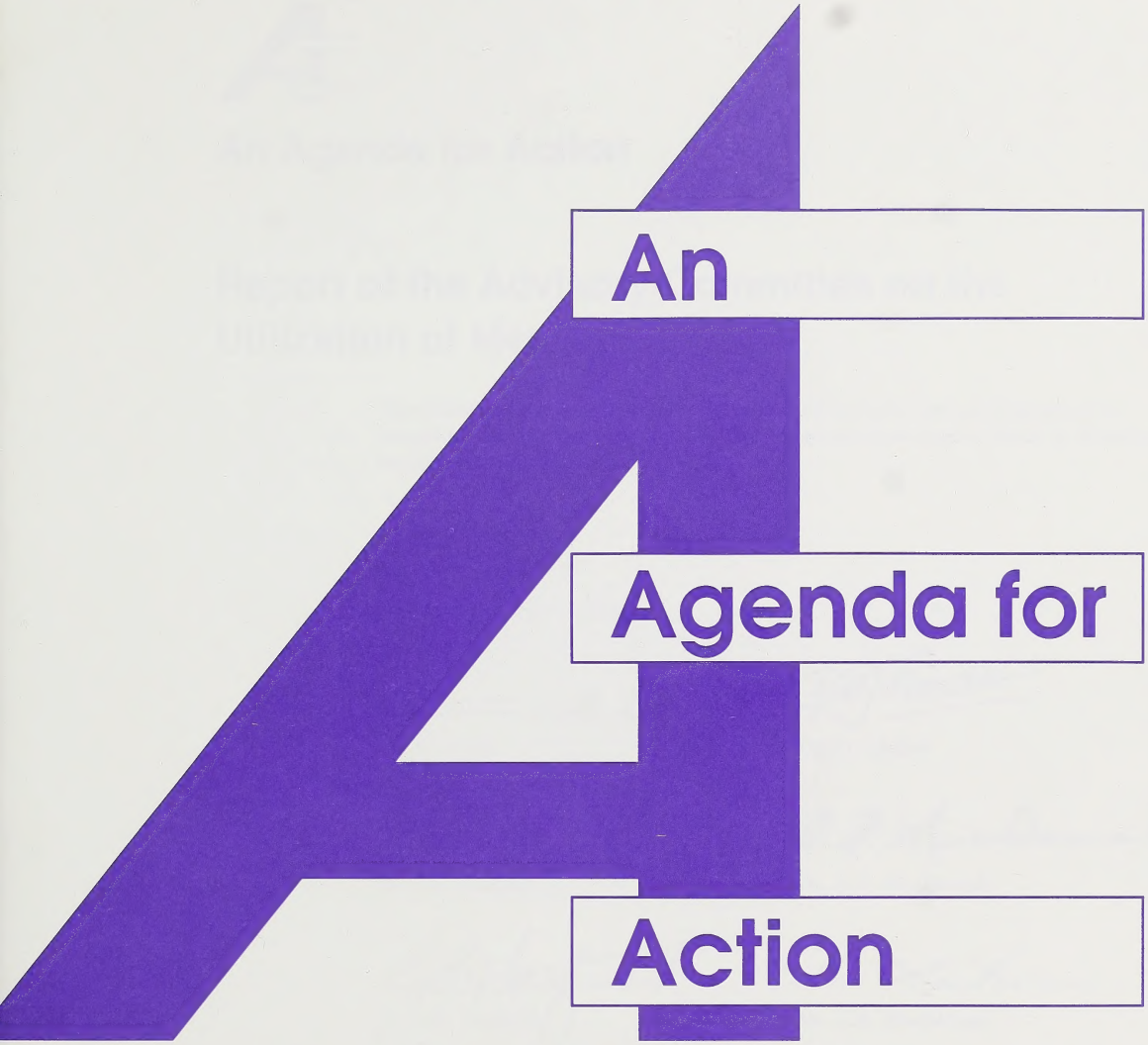
An Agenda for Action

Report of the Advisory Committee on the Utilization of Medical Services

Alberta
GOVERNMENT OF ALBERTA



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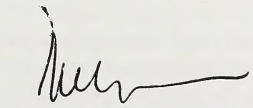
The Advisory Committee on the Utilization of Medical Services is pleased to transmit its final report *An Agenda For Action*, to Honourable Nancy J. Betkowski, Minister of Health, Province of Alberta.



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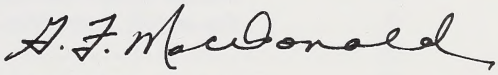

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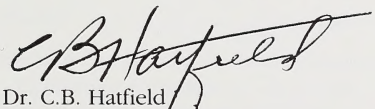

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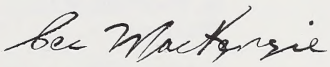

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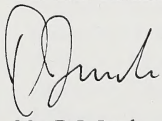

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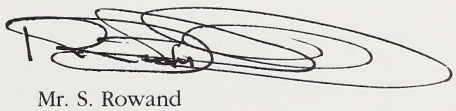

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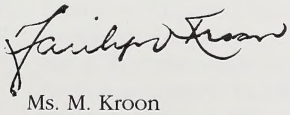

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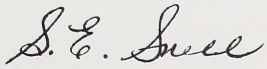

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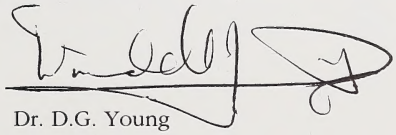
Ms. S. Larsen



Dr. D.G. Young

Acknowledgements

As Chairman of the Advisory Committee on the Utilization of Medical Services, I wish to express my gratitude to all of the members of the Committee for their cooperation, commitment, and dedication. I appreciated their candour and honesty, their ability to assimilate diverse viewpoints, their flexibility and adaptability in reaching consensus, and especially their abundance of good humour. We were fortunate in having members with special expertise and knowledge representing diverse backgrounds and experiences. It was particularly useful to have departmental staff from Alberta Health as members of this Committee. Many Committee members made personal and professional sacrifices to attend to this commitment so that I am truly grateful for their contributions and their genuine interest.

The members of the Department of Hospitals and Medical Care (now Alberta Health) deserve a special word of thanks for the preparation of background material, for their response to our requests for data analysis and their general support for the activities of this Committee. We would like to acknowledge Dr. W. Chang's special skill in distilling a complex discussion into a few lines of well minuted observations, Mr. J. McDonough's equally impressive ability to compress two years of abstract thoughts into a coherent report and the willingness of Dr. Y.M. Cheung to provide timely statistical information.

I would like to acknowledge the accessibility of the Honourable Marvin Moore and the Honourable Nancy Betkowski and their support and encouragement for this project. It has been a pleasure serving both Ministers.

M. Watanabe, M.D.
Chairman.

October, 1989

Table of Contents

Section I: Introduction

Foreword

For some time, it has been apparent that the use of physician and diagnostic services in Alberta is on the rise. It is clear that the factors contributing to this increase are many and complex, but the trend naturally prompts concern about the health care system's continued ability to meet the needs and demands of people in this province.

This report outlines the findings of the Advisory Committee on the Utilization of Medical Services (referred to hereafter as the Advisory Committee). The committee has developed a series of recommendations that constitute an agenda for action — an agenda that will help Alberta maintain its health care system as one of the best anywhere.

The main body of the report is divided into two parts. The first section deals with the specific issues on which the Minister of Hospitals and Medical Care (and subsequently the Minister of Health) requested advice. The second deals with long-term issues, discussed in the broader context of barriers to cost-effective care.

A report such as this cannot be exhaustive. While the committee was able to examine some issues in detail, the magnitude of the task, time constraints and the lack of current data precluded a detailed analysis of all areas where use of services is increasing.

Background: The Advisory Committee on the Utilization of Medical Services

The Advisory Committee was established in 1987 to advise the Minister of Hospitals and Medical Care on how to implement an earlier document, the Utilization Committee Report (1985). This first committee had been formed to identify factors contributing to an increased use of physicians' and diagnostic services, reflected in the increased billings by physicians to the Alberta Health Care Insurance Plan (AHCIP) between 1979 and 1983.

The Advisory Committee's original terms of reference reflected recommendations made by the Utilization Committee (see Appendix 2). Its mandate was subsequently broadened to encompass all physician-related health care services in the province, and its terms of reference amended (see Appendix 3).

The committee was fortunate in having five members who had already been part of the previous Utilization Committee. This provided continuity of thought and action. The Advisory Committee was originally made up of members nominated by various health care organizations, including:

Alberta Medical Association — two members
College of Physician and Surgeons (Alberta) — two members
Alberta Association of Registered Nurses — one member
Alberta Hospital Association — one member
Professional Association of Interns and Residents of Alberta — one member

Medical schools — one member
Department of Hospitals and Medical Care — three members

Subsequently, two more members were added, representing home-care and acute-care nursing.

The committee met on 18 occasions between October 1987 and September 1989. As recommendations were developed, they were transmitted to the former Minister of Hospitals and Medical Care and to the current Minister of Health.

Although work focussed on formulating policy, the committee also implemented some of its own recommendations, especially in the area of communications. This was done in an attempt to assess the feasibility of some proposed actions and to measure their impact. Several members also participated in public and professional forums to discuss the committee's activities and mandate — i.e., to make recommendations that would decrease utilization and costs, while improving the quality of care.

While the Advisory Committee did not actively solicit public input, many individuals and groups provided suggestions, ideas and comments that were greatly appreciated. The committee did seek expert advice from health care economists, Dr. Malcolm Brown of the University of Calgary, Dr. Richard Plain of the University of Alberta and Mr. John Swiniarski then of the Alberta Medical Association. Information was also sought from Dr. R. Hulyk, Chairman of the Medical Practice Audit Committee of the College of Physicians and Surgeons (Alberta). The Foothills Hospital was asked to make a presentation on its Value Improvement Program. Dr. J. Parboosingh and Ms. J. Lockyer from the Office of Continuing Medical Education at the University of Calgary provided information on strategies for altering the behaviour of physicians.

Three months after the formation of the Advisory Committee, the Premier's Commission on the Future of Health Care for Albertans was established. The two groups met on several occasions to exchange information to ensure that their efforts and activities were complementary.

An Agenda for Action

A Summary of the Report of the Advisory Committee on the Utilization of Medical Services

Our terms of reference called on the Advisory Committee to look at many issues some of which were quite specific and others which were broader in nature. The results of our investigations are summarized in a report running over 140 pages and containing 132 specific recommendations. The recommendations, which can be found throughout the report and again listed in Appendix 10, are in some cases very narrow and specific and in others, call for sweeping changes in Alberta's health care system. If the Advisory Committee were to select themes or concepts arising out of our work that capture the spirit of our deliberations, they would include the following:

1. **Need for ongoing monitoring of utilization of medical services.**

   The Advisory Committee has found that since 1987, there has been a decline in the rate of increase in the use of medical services and for some specific services, actual decreases in the rate of utilization. This is the first such plateau seen since 1982 and to our knowledge is a phenomena that has not been experienced in other provinces in Canada. We cannot be certain why utilization has modulated but we think it may be due in part to the attention focussed on utilization issues by the Advisory Committee and stakeholder groups such as the College of Physicians and Surgeons (Alberta) and the Alberta Medical Association. As well, we believe that the spirit of cooperation which has existed in the past between the Government of Alberta and the medical profession has created an atmosphere where change can occur. In order to maintain the momentum of the Advisory Committee, we have recommended that a permanent Monitoring Committee be put into place composed of representatives of stakeholder groups to ensure that the use of medical services continues to be examined and issues of concern brought to the attention of practitioners and the public.

2. **A comprehensive communications strategy for public dialogue on health issues.**

   Correct and easily understandable information is essential to any effort to change the way that providers and patients use our health care system. If we are correct in our assumption that the focus on utilization issues created by the Advisory Committee had some impact on modulating utilization rates, then it demonstrates the importance of ongoing communication with health care providers and with the public. The Advisory Committee has therefore recommended that the Minister of Health establish a Communications and Community Advisory Committee to serve as an advocate for good health and community involvement, as well as being the source of reliable health information. Its

principal task will be to advise the Minister on the development of health promotion campaigns, create greater public awareness of health costs, and encourage the appropriate use of health services. Together with stakeholder groups, and with the support of the proposed Monitoring Committee, it is our view that the Communications and Community Advisory Committee can play an important role in bringing to the attention of practitioners and the public significant health and utilization trends which require attention.

3. **Need for goals and objectives for Alberta's health care system**

In the 1989/90 fiscal year, Alberta will spend nearly $3.5 billion on health care, yet goals and objectives for this very large public expenditure program are not clearly articulated or easily accessible. Goals and objectives are essential to guide and plan Alberta's health care system and to serve as a benchmark for evaluation. The Advisory Committee has therefore recommended that the Minister of Health ask the Universities of Alberta and Calgary, together with Alberta Health, to convene a conference in the spring of 1990 with representatives of all stakeholder groups throughout the province to attempt to achieve consensus on goals for the health care system and to develop strategies for the delineation of specific and measurable objectives related to each goal. It is proposed that such conferences be held biannually in order to regularly refine goals and objectives previously set and to evaluate progress in their attainment.

4. **Better information on the health status of Albertans and on utilization patterns is needed.**

At present, Alberta does not have adequate information on the health status of its citizens either in aggregate or by regions, ethnic groups, or age groups. As well, the Advisory Committee was frequently hindered in its work because data on utilization patterns was either not available or was prohibitively expensive to obtain. Many of our health data bases were designed for purposes other than utilization monitoring and thus, accessing data is frequently cumbersome. With the existing horizontal organization of our health care system, the maintenance of separate data bases by different sectors in the health care system which are not integrated with each other make it impossible to obtain a comprehensive view of utilization patterns. In many cases, data is not recorded in the same way by different sectors of the health care system. The Advisory Committee has therefore recommended that all medical services, regardless of where they are performed, be counted and recorded by uniform methods and that an efficient information retrieval system be developed to assure that data about health care use is current and of good quality. We have also recommended that health status data be regularly collected for evaluation and planning purposes.

5. **Significant enhancement of health services evaluation and research activities is required.**

While Alberta has been a leader in funding biomedical research, there is inadequate support for research into health services with respect to cost effectiveness, alternative delivery systems, quality of care, outcomes and effectiveness of care, technology assessment, epidemiology, and development of health promotion and prevention strategies. Traditional biomedical funding sources have directed their funds to basic and clinical research. There is also a shortage of expertise in health services research. The Advisory Committee has recommended that the Province of Alberta establish a health services research agency, similar to the Alberta Heritage Foundation for Medical Research, and redirect at least 1% of annual public expenditures on health care to this agency to fund health services research and program evaluation initiatives.

6. **Increased support for ambulatory care and non institutional care is encouraged.**

The focus of our health care system in this century has been the acute care hospital. Hospital care for many forms of illness is extremely expensive and is not always necessary. Recent developments have allowed many forms of care to be provided on an outpatient basis or in the home, thereby avoiding the need to be admitted to hospital. The Advisory Committee has therefore recommended that Alberta Health encourage, through the use of funding incentives, a shift from inpatient care to ambulatory care and home care where clinically appropriate and economically desirable. Such a shift should occur through transfer of funds now used for inpatient activities to support these new thrusts. To help ensure that such developments occur in an orderly and planned fashion, we have recommended that there be legislation requiring the registration of such facilities.

7. **There is a need for better information on manpower to assist in planning.**

The Advisory Committee found that there are significant discrepancies between different data bases on physician numbers currently used for manpower planning activities. Moreover, such counts do not take into account time spent by physicians in non-clinical activities such as research, teaching and administration. Similar issues arise in examination of nursing manpower issues. Suggestions of a nursing shortage at a time when more nurses are working than ever before suggests that a greater number of nurses are working in part-time positions. In the face of inadequate and at times conflicting data, the Advisory Committee has concluded that there is not sufficient good information to draw conclusions on the relationship between physician manpower and the use of medical services or for manpower planning purposes in medicine, nursing, and other disciplines. We have therefore recommended that a Centre for Health Manpower Studies be established, under the guidance of an Advisory Committee, to monitor manpower supply and develop new and accurate manpower measurements.

The above represent highlights or major themes contained in the report of the Advisory Committee. The complete report contains much more detail and many additional recommendations. The report in total constitutes, in a sense, a strategic plan for Alberta's health care system.

There is little value in identifying opportunities for positive change unless those changes are implemented. Unless a structure and an approach is put into place to address these recommendations, the time, energy, and commitment of the many people involved directly and indirectly in our work will have been lost.

Happily, some initiatives arising from the Committee's recommendations are already underway. A committee has been formed to study the acute care hospital funding system and propose improvements. A trial is underway to link Alberta's Health Care Insurance Plan data with hospital data at the Red Deer General Hospital to obtain a comprehensive look at use of laboratory services in that region.

Many of our recommendations call on Alberta Health, together with stakeholders, to form committees or task forces to address specific recommendations contained in this report. We are convinced that cooperation between government, health care providers, and the Alberta public is necessary if meaningful change is to be successfully implemented.

While it will clearly rest with the Minister and Alberta Health to develop the most appropriate structure, the Advisory Committee urges that specific persons and sections in Alberta Health be designated responsible for implementation of specific recommendations. We suggest that Alberta Health institute a steering committee to assign priorities and serve as a coordinating and facilitating body. And finally, we encourage the Minister of Health to begin discussions with all stakeholder groups with respect to this report in order to test reactions and to engage their interest, support, and acceptance for our recommendations.

Section II: Specific Utilization Issues

1.0 Trends in Alberta's Use of Health Care Services[1]

Trends in the demographics of Alberta's population and in the use of medical services have continued to evolve since the 1985 report of the Utilization Committee. Since that report included data to March, 1984, this update will concentrate on changes between April, 1984 and April, 1989.

During that period, the population of Alberta increased by 84,400 or 3.6% (see Table 4.1).[2] The data indicates that the province's population is aging. Between June 1984 and June 1988, the 65-and-over age group increased by 27,200 persons, the 45-64 age group by 22,100, and the 25-44 age group by 47,200. On the other hand, the 15-24 age group decreased by 52,600 and the under-one age group by 2,300. The 1-14 age group increased by 10,600 (see Table 4.2). This changing age pattern is reflected in the data on health care users (see Table 5.4).[3]

1.1 The Trend to Slower Increases in Health Care Use

The number of persons insured by AHCIP increased by 75,030 (3.1%) from 1984 to 1989. However, the number of discrete patients (i.e., the number of patients for whom at least one medical service was provided during a year) rose more quickly, increasing by 141,168 (6.8%) (see Table 4.1 and Figure 1.1). This indicates that a larger percentage of the population used the health care system at least once a year. The data for 1988-89 indicate that 87.6% of AHCIP registrants used the health care system at least once.

However, during the past two fiscal years (1987-88 and 1988-89), this increase in use levelled off significantly, according to most measurements. One measure of use is the total number of medical services provided to Albertans by practitioners inside and outside the province. This number increased by an average of 6.4% per year from 1984 to 1987. However, it declined by 0.6% in the 1987-88 year (see Table 4.4 and Figure 1.2).[4]

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[1] The tables specific to this chapter are attached in Appendix 4.

[2] The population increase has been calculated in other reports using October 1 — the mid fiscal year — as the benchmark dates. In this case the increase was 61,600 persons or 2.6%.

[3] This table is included in Appendix 5.

[4] This table shows data on services which were provided to Alberta residents on a fee-for-service basis by medical practitioners in and outside of Alberta during the years ended March 31, 1980 to 1988. The data for each year were compiled on a date-of-service basis.

Table 4.4 is an update of table 5 from the 1985 Utilization Report. Data for 1984-85 to 1987-88 were added to the table. The original specifications which were used to classify the services by type of service from 1979-80 to 1983-84 were not available. As a result, the data for 1984-85 to 1987-88 were generated based on the type of service assignment which existed within each year. There may be some differences in the classification of services by type of service during the period due to this approach.

This slowdown continued during 1988-89. However, due to the problems of estimating with limited data, the exact amount is still unclear. AHCIP reports data in two ways: date-of-service (i.e., when a patient received a health care service): and date-of-payment (i.e., when a practitioner is reimbursed for the service). The latter reporting method is available more quickly; it was the only information available for the year 1988-89 at the time this report was prepared. The date-of-service measurement had been used as the basis for the analysis in the 1985 Utilization Report and is used in this report to provide continuity. A comparison of the two reporting methods for the period from 1984 to 1987 indicates that date-of-service measurements are reasonably similar to date-of-payment measurements.

These increases must, of course, be considered in the light of overall population increases. When calculated on the basis of the number of services provided per 1,000 insured persons, the annual increase averaged 6.2% from 1984 to 1987. In 1987-88, the number of services per 1,000 insured persons decreased by 1.4%, while date-of-payment data for 1988-89 indicate that the decrease that year was 0.03% (see Table 4.5 and Figure 1.1).

The obvious question is why has this decrease occurred? One possible reason for the decrease is the fact that some medical services were deinsured on two occasions — October 1, 1986 and August 1, 1987. However, on close analysis deinsurance does not appear to be the major factor in the decreased use of medical services.

The impact of deinsurance was examined by counting services rendered for the 12 months preceding and the 12 months following the deinsurance dates. The first fiscal year to be affected by the change was 1986-87. During that year, the deinsured services represented only 0.29% of the total number of services provided. In 1987-88, they accounted for 1.02%. These numbers are clearly not sufficient to reverse a previous trend with increases in the neighborhood of 6.4% a year.

1.2 Physicians and Health Care Use

The total number of physicians who bill AHCIP increased from 3,233 in 1984 to 3,905 in 1989, a total increase of 20.8% (see Table 4.3). This statistic must be interpreted with some caution, since a change in billing procedures for laboratory and radiology specialists instituted on August 1, 1987 makes the number prior to 1987 not entirely comparable to those since that date. Excluding laboratory and radiology specialists, the annual increase in number of physicians has been:

1984-85 – 3.8%
1985-86 – 5.9%
1986-87 – 3.1%
1987-88 – 3.3%
1988-89 – 2.1%

During this five-year period, the number of general practitioners increased by 18.5%, while the number of medical and surgical specialists grew by 20.8%. However, these statistics are slightly skewed by the fact that emergency physicians, who are now recognized as specialists, were classified as general practitioners until 1986-87.

Office visits make up the single largest category of fee-for-service items reimbursed by AHCIP.[5] In 1987-88, they accounted for 40.6% of total services provided and for 39.7% of total payments (see Table 4.6). There have been some interesting trends with respect to this category of services.

First visits for new illnesses requiring a complete medical history and examination of all major systems (i.e., visits for serious illnesses) represented about 10 per cent of office visits in 1988-89 (see Table 7.1). In 1987-88, the number of services provided in this category increased by 3.6%, but in 1988-89, an increase of 7.6% was recorded (see Table 7.3). This jump is due predominantly to office visits to ophthalmologists and reflects the August, 1987 changes to the Schedule of Medical Benefits in which routine eye examinations that are not medically required were removed as an insured benefit for persons 19 to 64 years of age. The growth in office visits to ophthalmologists reflects the increase in the number of medically required eye examinations. This increase does not represent new ophthalmology services but reflects a recategorization of eye examinations from procedures to the category of office visits.

In fact, there has been a decrease in complete office examinations for all other physician groups except pediatricians and the "others" category. However, family and general practitioners are seeing increasing numbers of "minor" complaints.

There are a number of possible reasons for this shift. Patients may be seeking medical attention for less serious complaints as a result of better public awareness about health issues. Alternatively, they may be responding to the greater convenience and improved availability of physicians through "walk-in" clinics or extended hours in regular practices. On the other hand, the trend may reflect changing attitudes and practices on the part of physicians themselves, with greater emphasis on quick assessment and interventions. This could be influenced by the structure of, and perceived inequities in the Schedule of Medical Benefits.

1.3 Radiology

Although most of the data examined by the Advisory Committee relates to physician billings, the committee also analyzed hospital data for radiological services. This was considered important because of the large amount of diagnostic imaging services provided in hospital settings.

Hospital services showed the same pattern of decreasing use demonstrated in other categories of medical service during 1987-88. It is of interest that the decrease in use of hospital radiology services occurred in the same year that global budgets for hospitals were cut by 3%. In contrast the use of private radiology facilities increased in that same year. It may be argued that increased use of fee-for-service radiology represents a shift of services formerly performed in hospitals (see Table 4.7 and Figure 1.3).

[5] For a more detailed discussion of office visits see Chapter 7, "Office Visits" and Appendix 6 for the corresponding tables.

1.4 Conclusion

What or who has been responsible for the fact that use of health care services has levelled off in the past two years? Since physicians have been blamed for most, if not all, of the increasing utilization during periods of rather dramatic growth, the Advisory Committee suggests that they should be credited with at least some of the effect. Committee members have sensed a spirit of cooperation on the part of the profession with respect to rationalizing the use of health care services.

Specifically, the Alberta Medical Association has continued its efforts to raise utilization as a priority issue requiring resolution, and the College of Physicians and Surgeons' Medical Practice and Audit Committee has increased awareness of health care cost among physicians.

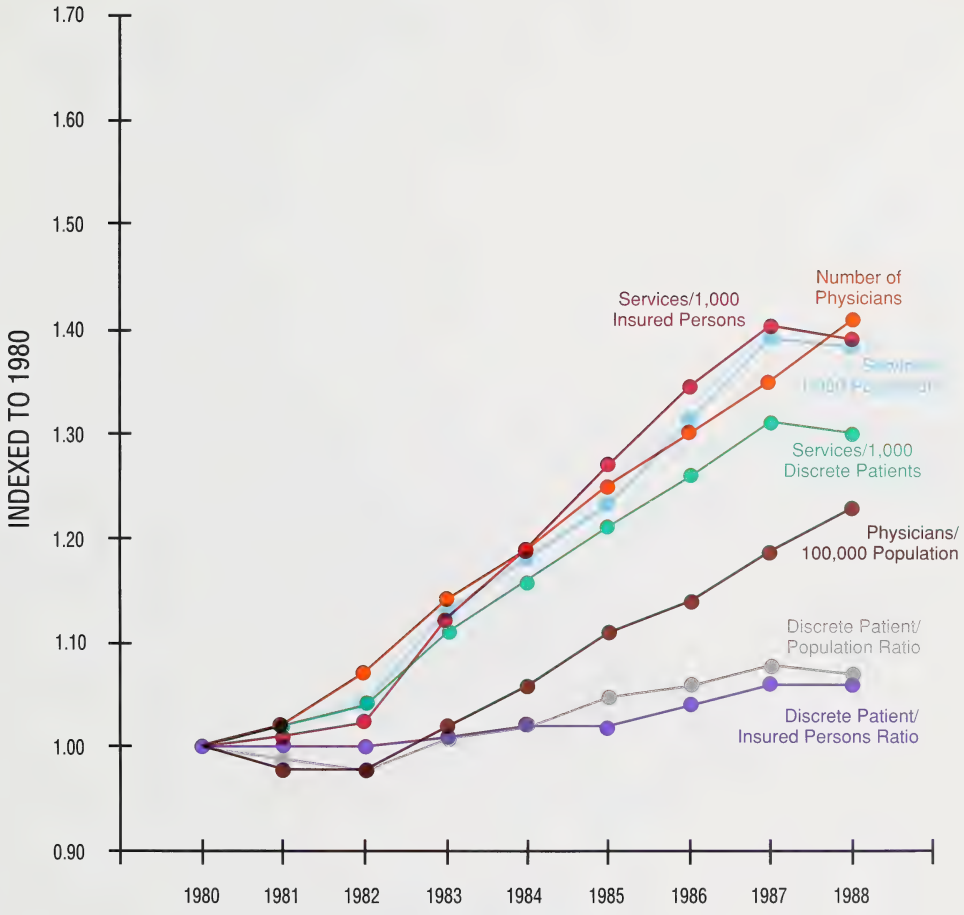
Continuing medical education programs now include health care use and cost issues as part of the curriculum. Some Alberta hospitals have played leadership roles in cost containment programs and have developed innovative peer review, medical audit and quality assurance programs.

Government actions, the public forums held by the Premier's Commission on Future Health Care for Albertans, the participation of Advisory Committee members in conferences, media interviews and published articles have all helped to increase public and professional awareness of various aspects of health care cost. Most important, the improving relationship between the profession and the government has undoubtedly played a key role in helping the profession to make health care economics a priority.

To the best of the committee's knowledge, Alberta is unique in the slowing down of increases in the use of health care services. The reasons for this change are complex and difficult to interpret. Nevertheless the Advisory Committee feels it is essential that we continue to monitor use of the health care system, that we develop the best information base possible so that monitoring can occur, and that health care professionals be intimately involved in the process of reviewing quality and utilization.

It is important that the lines of communication between government, health care providers and health care consumers be kept open. Rising health care costs must be a concern for everyone. Given the complexity of the issue, a collective approach and common understanding will be essential in developing solutions.

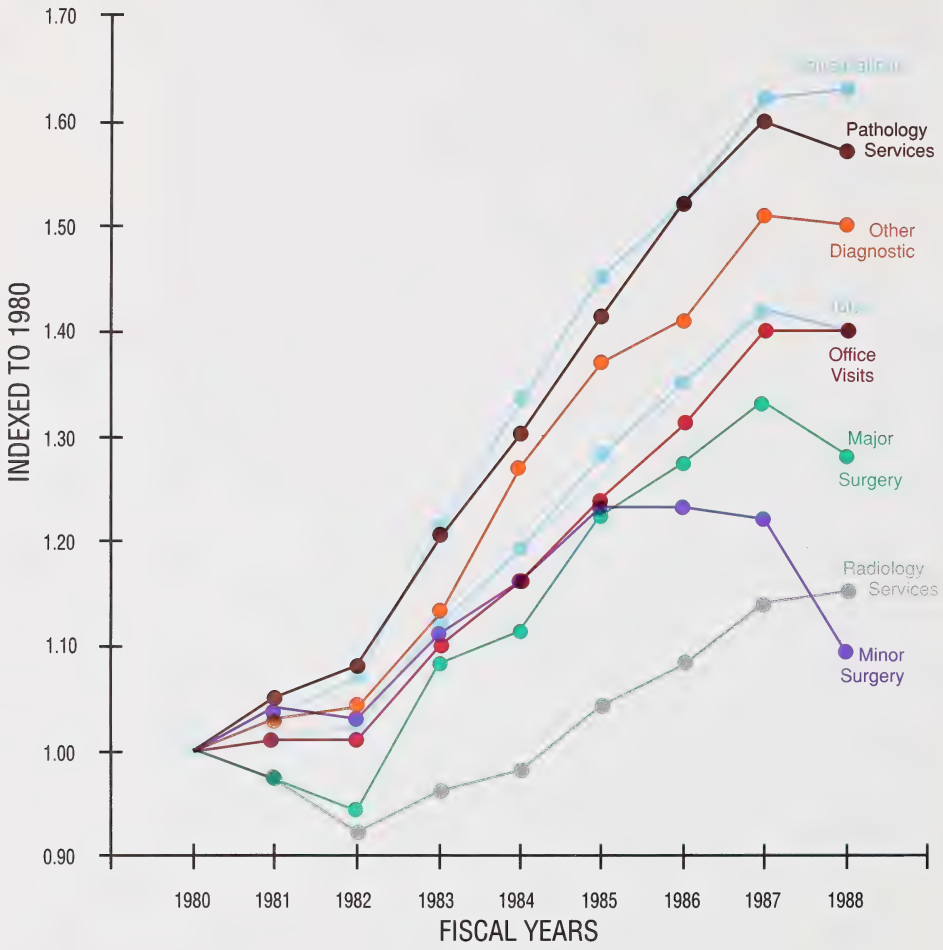
Figure 1.1 — Annual Changes in the Selected Indicators
Relating to the Utilization of Medical Services
for the Years Ended March 31, 1980 – 1988 (Indexed to 1980)



The medical service data consist of fee-for-service items which the AHCIP paid to medical practitioners in Alberta for services which were provided to Alberta residents during the years ended March 31, 1980 to 1988. The data are compiled on a date-of-service basis.

September 26, 1989, Health Economics and Statistics, Alberta Health

Figure 1.2 — Medical Services per 1,000 Registered Persons for Selected Types of Service for the Years Ended March 31, 1980 – 1988 on a Date-of-Service Basis (Indexed to 1980)

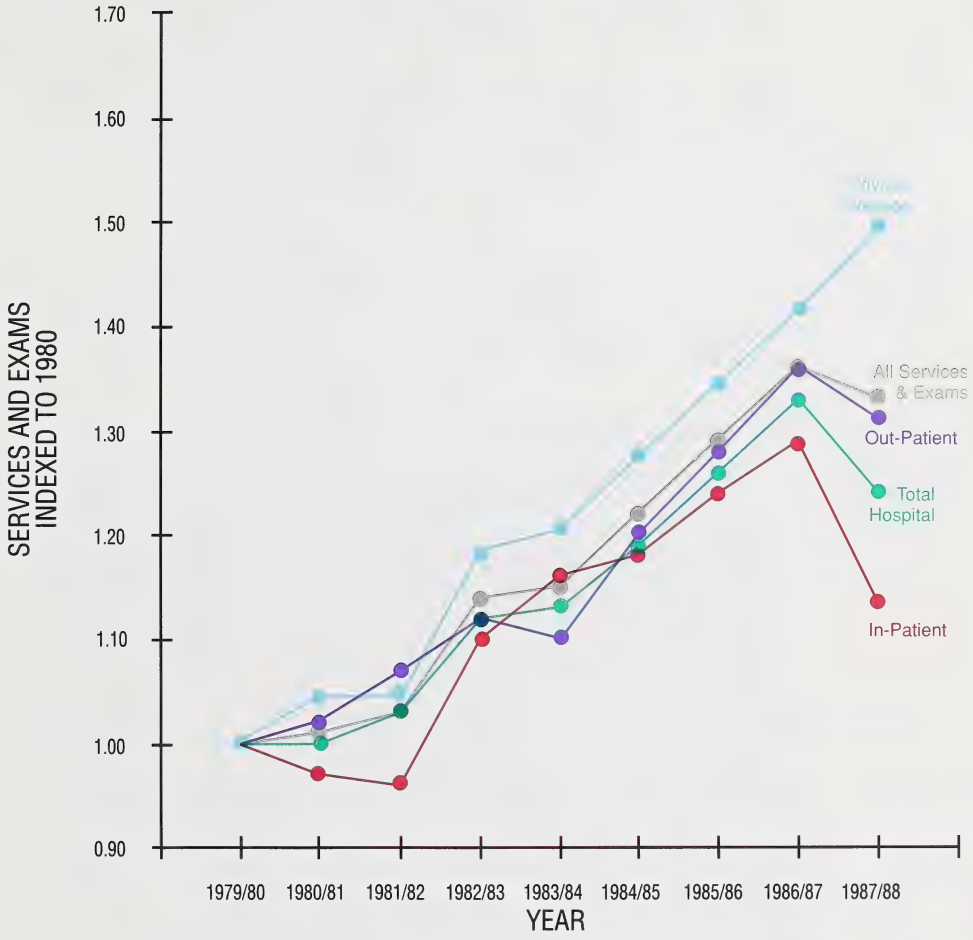


Notes:

1. Sources: Service data for 1979-80 to 1983-84 — "Utilization Committee Report to the Minister, September 1985," Table 8. Service data for 1984-85 to 1987-88 — Alberta Health Care Insurance Plan (AHCIP), Claims File.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in and out of Alberta for services which were provided to Alberta residents during the years ended March 31, 1980 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.

August 22, 1989, Health Economics and Statistics, Alberta Health

Figure 1.3 — Private and Hospital Diagnostic Radiology Services and Examinations



2.0 Information Systems/Data Management

There has always been a need to accurately monitor the use of medical services, in order to plan and fund health services effectively within unavoidable resource constraints. As the rate of use increases and the mix of services provided continues to change, it will become even more critical to be able to identify emerging trends and determine whether policies and programs continue to be effective.

In order to monitor the use of medical services, accurate and current information must be available on the services delivered by all health care sectors. The data from each sector must link with and be compatible with the data from the other health care sectors in order to provide an accurate and comprehensive picture of health care use.

2.1 Committee Activities

2.1.1 The Advisory Committee reviewed Alberta Health initiatives that address the problems of data linkage and information sharing: the Health Information Processing Strategy (HIPS), the redevelopment of the Practitioner Profiles, the Claims System Redevelopment Project, an Electronic Claims Submission pilot (MEDILINK), and the redevelopment of the Health Care Insurance Statistical Information Base. The committee also discussed the initiative taken by the federal, provincial and territorial Deputy Ministers of Health on the concept of a National Health Information Council.

2.1.2 The Advisory Committee recommended that Alberta Health undertake a data linkage pilot project. Committee members worked with department staff to plan and initiate the project. The project's immediate objective is to discover how practical it would be to merge data collected from the computer systems of participating hospitals (Wetaskiwin and Red Deer) with the data base of the Health Care Insurance Plan. The project will determine the compatibility of the data from separate systems, the difficulty of converting existing data to a common format and the usefulness of the resulting information.

The eventual goal of the Data Linkage Pilot Project is to determine whether the data needed for monitoring can be collected from the various computer systems in hospitals, private laboratories and provincial laboratories. The project also seeks to determine whether information can be collected on how medical services are used between various medical facilities and within the health care system as a whole. The project will identify specific problems and opportunities with data collection. It will examine the costs and benefits of linking information about diagnostic tests (and potentially other services) performed in hospitals and the fee-for-service sector. Data collection will take place in late 1989 and the pilot project will be evaluated in early 1990.

2.1.3 The Advisory Committee, in cooperation with Alberta Health, reviewed the categorization of data in the Schedule of Medical Benefits. At present, the federal government and all provinces code payments according to the type of medical service provided. Alberta Health currently divides medical services into thirteen broad categories and a number of subcategories. Over time the health

care system has changed and the usefulness of the existing categorization is in doubt. The Advisory Committee has developed a new approach with seven medical services categories. The new categories are flexible and can more easily be adapted to current medical services. If this new system is put into effect it will form the basis of an improved monitoring system for medical services in Alberta.

2.2 Issues

2.2.1 Effective utilization monitoring is an essential step in planning Alberta's health system. However, without an easily accessible, comprehensive system of data on individual health status and utilization information about health service use, utilization monitoring is difficult (see Chapter 15, "Information Systems").

2.2.2 The health care delivery system in Alberta is horizontally organized into separate programs and functional areas. A variety of separate and distinct data bases have been developed over the years to serve different purposes related to these programs and functional areas. At present these data bases are not compatible with each other. In order to link them, terminology and definitions must be standardized. The separate data bases may need to be redesigned or information access software developed, or both.

2.2.3 The cost of developing these new information systems will be in the millions of dollars. Potential overall savings could be in the hundreds of millions. The problem is that resources are scarce and information systems are not perceived as having a direct effect on health care costs. The issue is how to get the needed resources to develop information systems that will allow a thorough monitoring of the use of the health care system, to plan that system more effectively for the future.

2.3 Committee's Observations and Conclusions

2.3.1 The Advisory Committee supports and encourages the data linkage initiatives and pilot projects which have been undertaken by Alberta Health.

2.3.2 A reliable data base from which accurate, complete, and current information can be derived is necessary for effective planning and monitoring.

2.3.3 The most important data base, the Alberta Health Care Insurance Plan's claims file, contains information on all health care services for which a practitioner has claimed a benefit on behalf of a patient. Since it was developed as a practitioner payment system, it is cumbersome for monitoring the use of the health care system and has limited value for analysis and planning purposes. In order to be an effective monitoring tool, a categorization system should be able to track changes in utilization in a consistent fashion.

2.3.4 Hospital encounter information is recorded on a variety of data bases that provide only statistical and financial data. There is no link between the AHCIP data base and the various hospital data bases.

2.3.5 There are other data bases related to specific health care programs, including public health information collected by health units and mental health information. There are a variety of national and provincial health and sickness surveys. None of these data bases are linked.

2.3.6 Completely different information-gathering systems are used by each of the different laboratory sectors: private laboratories, hospital laboratories, the provincial laboratories, and the Red Cross laboratories. It is not currently possible to monitor diagnostic activities across these sectors.

2.3.7 One of the early findings of the Linkage Pilot Project is that different hospital laboratories do not categorize procedures uniformly.

2.3.8 Institutional and practitioner funding systems have not been designed to meet utilization goals or objectives.

2.3.9 The ideal data collection system for health services should be able to identify each service received by each patient from each practitioner at each service delivery point. Data should be collected on all interactions with every component of the health care system.

2.3.10 More accurate, timely and compatible information and improved information gathering and analytical systems will result in savings to the health care system in the hundreds of millions of dollars. These savings will far outweigh the cost of implementing new information systems. This cost will be in the tens of millions over a three- to six-year time span.

2.4 Recommendations

The reader is also referred to the Recommendations in Chapters 12, 13 and 15: "Institutional Funding System," "Practitioner Payment System" and "Information Systems."

2.4.1 **Monitoring Committee:** A Monitoring Committee with representatives of the professional associations, the various health care stakeholder groups and Alberta Health should be established to review, count and analyze the use of all health care services. The Monitoring Committee should use the resources of its member groups in carrying out its responsibilities.

2.4.2 **Monitoring Committee's Terms of Reference:** The Terms of Reference for the Monitoring Committee recommended above should include the responsibility for developing and supporting an improved monitoring system. This system will record and measure the future use of medical care services in Alberta. In addition the Monitoring Committee should guide the redevelopment and enhancement of health care information systems in Alberta.

2.4.3 **Uniform Recording of Data:** All medical services should be counted and recorded by uniform methods in order to generate complete and comparable data. The ideal recording system will record every interaction noting each service received by each patient, from each practitioner at each service delivery point. The system should be able to cross reference each element of the interaction (see Recommendations 3.3.7, 3.3.8, 15.3.2, 15.3.4).

2.4.4 **Information Retrieval:** An efficient information retrieval system should be developed to ensure that data about health care use will be current and of good quality.

2.4.5 **Intergovernmental Cooperation:** Alberta should continue to work with the federal and other provincial governments to improve the comparability of its data monitoring with theirs.

2.4.6 **Categorization of Medical Services:** Data derived from the Alberta Health Care Insurance Plan's claims payment system should be categorized into the following seven broad categories: consultations, visits, surgery/procedures, anesthetic, diagnostic imaging, pathology and other (tray fees). This categorization is described more fully in the Advisory Committee's background report: "Categorization of Medical Services." This plan should be implemented as soon as possible (see Recommendation 13.3.3).

2.4.7 **Monitoring Categorization System:** The new system of categories will have to be maintained so that new procedures are included promptly and so that categories are applied more consistently than is the case with the current system. This task could fall to the proposed Monitoring Committee (see Recommendation 2.4.1).

2.4.8 **Linkage Pilot Project:** The Linkage Pilot Project should be continued and evaluated according to the schedule proposed by Alberta Health. The results of this pilot should be used to develop a more comprehensive system of data retrieval and linkage between the hospital sector, the various laboratory sectors and the Alberta Health Care Insurance Plan.

2.4.9 **Financial Resources:** Alberta Health should provide the necessary human and financial resources required to implement recommendations 2.4.4 to 2.4.8 within a five-year time span. The Advisory Committee acknowledges that 2.4.3 is a long-term goal; however, the committee expects that there would be significant progress towards its achievement within five years.

3.0 Diagnostic Services

For the purpose of this report, the term "diagnostic services" refers to pathology, diagnostic imaging, and a group of services categorized as "other diagnostic," which include EEG, ECG, EMG,[6] pulmonary function studies, etc. From a medical point of view a wide range of services are diagnostic or have a major diagnostic component.

Diagnostic services are required to provide information to the physician which, in conjunction with other data, serve as the basis for making decisions about the care of patients. Those services are performed only at the request of a physician. Diagnostic services must be appropriate to the patient's needs, timely, and of the highest quality.

Activity data for 1987-1988 and preliminary data for 1988-1989 indicate that the rate of increase in diagnostic services has levelled off, paralleling the rate for other medical service categories. This demonstrates the close relationship between diagnostic and other medical services. The Advisory Committee has looked most closely at pathology services since this group has been growing at a faster rate than the other services.

3.1 Committee Activities

3.1.1 The Advisory Committee on the Utilization of Medical Services established a subcommittee of representatives from hospital pathology laboratories, private pathology laboratories, provincial laboratories and the Red Cross Blood Transfusion Service to work with representatives of Alberta Health. The subcommittee examined and made recommendations on the role of each pathology sector. (See The Report Of The Subcommittee On Laboratory Services, March 1989.)

3.1.2 The Advisory Committee addressed the need for more complete data on the use of diagnostic services including pathology, diagnostic imaging and others, and the need to include data from hospitals and other specialty facilities.

3.1.3 The Advisory Committee encouraged Alberta Health to develop a pilot project at the Red Deer and Wetaskiwin hospitals to ascertain the feasibility of linking hospital pathology data to patient and physician data from the Alberta Health Care Insurance Plan. (See: Chapter 2, "Information Systems/Data Management" and Chapter 15, "Information Systems.")

3.1.4 The Advisory Committee has not been able to monitor all diagnostic services. Instead, it chose to review use patterns in selected procedures. Thyroid function studies, lipid studies and pulmonary function studies were the three areas specifically examined. Two articles have been published in the *Alberta Doctor's Digest*: a report on thyroid function testing, "Physicians Can Reduce Cost," by Dr. D.G. Young, (January/February, 1988); and "Difficult To Justify Routine Lipid Testing," by Dr. R.C. Cooper, (January/February, 1989).

[6] EEG — electroencephalogram; ECG — electrocardiogram; EMG — electromyogram

3.1.5 In 1988 and 1989, the Advisory Committee participated in a University of Calgary teleconference program on the appropriate use of thyroid function testing and lipid testing.

3.1.6 The Advisory Committee studied a recommendation from Alberta Health to expand the regional hospital laboratory system.

3.2 Issues, Observations and Conclusions

A. Pathology Services

A.1 Roles of Pathology Laboratory Sectors

3.2.1 Pathology laboratory service is a comprehensive term that includes diagnostic, reference, referral, public health, operational, consultative, educational, research and method development services. Pathology laboratory service also includes ensuring the safe supply of blood and blood components for transfusion therapy. Pathology laboratory services are provided by four major laboratory sectors: hospitals, private laboratories, provincial laboratories and the Red Cross Blood Transfusion Service. Each laboratory sector has its own primary objectives; however, there is considerable overlap in the services provided.

3.2.2 The issue is whether or not there ought to be clear and specific definitions of the roles and responsibilities of each pathology sector.

3.2.3 Future delivery of pathology laboratory services must be achieved by the four laboratory sectors acting in a coordinated manner while maintaining high quality service. Pathology laboratory services will become more cost efficient if the roles of each sector are defined and integrated to improve service delivery. (See Report Of The Subcommittee On Laboratory Services, March 1989.)

A.2 Pathology Laboratory Funding

3.2.4 Private pathology laboratories are funded by AHCIP through the Schedule of Medical Benefits on a fee-for-service basis. However, when these services are performed on patients in hospital, they are funded through the hospital's global budget. Hospital pathologists are either salaried or on contract.

3.2.5 Alberta Health provides the global budget for the provincial public health laboratories. The Edmonton laboratory is administered through the University of Alberta's Faculty of Medicine, the Calgary laboratory through the Foothills Hospital.

3.2.6 The Red Cross Blood Transfusion Service is funded by a grant from Alberta Health to the national Red Cross Blood Transfusion Service.

3.2.7 One consequence of having a variety of funding methods for pathology laboratory sectors is that costs cannot be compared. This leads to confusion and complaints of inequity. Hospitals are made responsible for funding services over which they have little management control. The lack of comparable activity data inhibits appropriate planning, reducing the potential for cost-effective delivery of diagnostic services.

3.2.8 Budget restrictions in one sector may result in undetected shifts to the other sectors. The report of the 1985 Utilization Committee documented how culture tests shifted to private pathology laboratories when budget cuts affected provincial laboratory services. Complementary mechanisms for identifying and counting diagnostic services would help in detecting shifts in service delivery and allow a more cost effective assignment of roles.

A.3 Data Collection

3.2.9 The main issue with respect to data collection is whether there should be consistent procedures for identifying, collecting and analyzing pathology data. Currently, procedures for counting or measuring activity data are based on information from the different funding mechanisms and are not compatible. Hospital pathology laboratories count Statistics Canada units of service, the provincial laboratories count numbers of cultures and the Red Cross report activity data to their national program and not to Alberta Health.

3.2.10 By contrast, services provided by private pathology laboratories are counted individually through the AHCIP payment records and are linked to the ordering physician and patient. There is no linkage of activity data between the AHCIP sector and the other sectors.

3.2.11 Since only some activity data are linked to the ordering physician, the Medical Practice and Audit Committee of the College of Physicians and Surgeons (Alberta) is unable to determine whether physicians are changing their practices with respect to pathology services.

3.2.12 The establishment of comparable data bases for all diagnostic sectors would permit the detection and quantification of shifts in services between sectors. This would improve decision-making and planning with respect to these services. The Advisory Committee believes that fee-for-service categories could be most easily adopted as the appropriate identification and counting mechanism.

3.2.13 As well, the establishment of uniform methods of counting diagnostic services and linking such services with the physician and patient would provide individual physician and patient profiles. These profiles would assist the Medical Practice and Audit Committee of the College of Physicians and Surgeons (Alberta) and Alberta Health in identifying potential abuse.

A.4 Monitoring of Specific Diagnostic Services

3.2.14 The Advisory Committee selected two specific areas for detailed monitoring: thyroid function (based on the rapid growth in this area) and lipid studies (based on their potential for future growth).

3.2.15

i. Thyroid Function — Thyroid function studies accounted for 7.1% of pathology services in 1988. The practice of ordering a complete thyroid function profile (three separate tests: T4, T3U, and TSH) as a screening battery is very expensive.

ii. The issue is to determine whether a more cost effective method of screening is available.

iii. Physicians in Alberta can significantly reduce the amount of money spent on thyroid function testing to detect unsuspected thyroid disease if they adopt a progressive profile. One test (T4) will effectively screen 90% of patients who will require no further testing. The other tests are for the 10% of patients whose results were not normal. Even with the costs of the extra visits for that 10%, the potential savings to the province would be approximately 50% of the cost of current practice.

3.2.16 i. Lipid Studies — The cholesterol-lowering program in the U.S.A. and the 1988 Canadian Consensus Conference on Cholesterol Testing have recommended dietary and/or drug therapy for patients with high cholesterol levels as a means of preventing coronary artery disease.

ii. The issue is to balance the added cost of lipid testing with the benefits achieved by lowering lipid levels and consequently decreasing the incidence of coronary artery disease and related heart diseases.

iii. It is estimated that 30% to 40% of Albertans have cholesterol levels above that recommended by the 1988 Canadian Consensus Conference on Cholesterol Testing, and hence require dietary and/or drug therapy. The potential increase in costs to Alberta Health for testing, drugs, dietary counselling and office visits has been estimated to be between $50 to $60 million. The Canadian Consensus Conference recommends that testing be limited to patients with risk factors for coronary artery disease. The adoption of this recommendation would significantly reduce the testing required and consequently the cost.

iv. In addition, the procedures recommended by the Canadian Consensus Conference to replace lipoprotein electrophoresis as a screening method for determining the risk of coronary artery disease are supported by the Advisory Committee.

A.5 Regional Hospital Shared Laboratory Services

3.2.17 There have been regional pathology laboratories at the Red Deer and Lethbridge hospitals since 1972. The issue is whether this practice of sharing laboratory services with rural hospitals ought to include other regions of the province. A related question is whether other hospital services ought to be shared.

3.2.18 Alberta Health's proposal to replace the present system of referral to private laboratories with interhospital laboratory referral would reduce private laboratory billings to AHCIP by approximately 3%.

3.2.19 This concept of sharing laboratory services with rural hospitals is being expanded to include the Grande Prairie Regional Hospital, The Medicine Hat General Hospital, the Rockyview Hospital, the Bonnyville Regional Laboratory, the Misericordia Hospital, the Grey Nuns Hospital and the University of Alberta Hospital.

B. Radiology Services

B.1 Definition of Roles of Radiology Sectors

3.2.20 Diagnostic imaging services are performed in both private and hospital laboratories. Alberta Health's funding policies restrict all computerized tomography and nuclear magnetic resonance imaging to the hospital sector. The majority of diagnostic imaging services between April 1979 and March 1988 were performed in hospitals.

3.2.21 The issue is whether or not there ought to be clear and specific definitions of the roles and responsibilities of each radiology sector.

B.2 Diagnostic Imaging Services Funding and Data Collection

3.2.22 Diagnostic imaging services performed in private laboratories are funded on a fee-for-service basis by AHCIP. Hospitals provide identical services for inpatients and outpatients under their own global budgets, with hospital radiologists being either salaried or on contract.

3.2.23 Hospital radiology laboratories count examinations and units. Private radiology services are recorded individually on AHCIP payment records. There is no linkage between these two sectors. The problems of activity data collection and analysis are similar to those faced by the pathology sector.

3.2.24 The overall rate of growth for radiology diagnostic imaging services has been lower than most other medical services. However the 30% increase in radiology services, in both private and hospital laboratory settings, between 1979 and 1986 has resulted in a 125% increase in annual costs, to $81.8 million. This rapid escalation in cost may be the result of changes in the mix of examinations, more expensive examinations and higher overhead.

3.2.25 Growth was most rapid for private radiology services, followed by hospital outpatient services. Hospital inpatient services remained relatively static.

3.2.26 The complex array of imaging and related diagnostic procedures require clinicians to plan the most appropriate strategies. Poor choices may lead to the unnecessary use of some services. When planning their diagnostic strategies, physicians may need to consult with radiologists to determine the optimum procedures.

C. Other Diagnostic Services

C.1 Other Diagnostic Services Funding and Data Collection

3.2.27 Private pulmonary function laboratories and non-hospital-based ECGs, EMGs, and EMGs are funded by AHCIP through the Schedule of Medical Benefits on a fee-for-service basis. However, when these services are performed on hospital-based patients they are funded through the hospital's global budget. The problems of collecting and analyzing activity data are similar to those faced by the pathology and radiology sectors.

C.2 Pulmonary Function Laboratories

3.2.28 Pulmonary function tests were selected for examination because of the rapid growth in services provided through the private laboratories. The issue is to determine whether or not this growth is justified.

3.2.29 In 1982 the College of Physicians and Surgeons (Alberta) began licensing pulmonary function laboratories. By 1988 there were four such laboratories in the province. There has been a significant growth of pulmonary function testing in private facilities.

3.2.30 The increased use of pulmonary function studies reflects both an increase in chronic pulmonary disease and testing to establish the need for oxygen therapy. Until recently oxygen therapy has been prescribed without appropriate testing. Although pulmonary function testing is expensive, unnecessary oxygen therapy is far more costly. The Advisory Committee's review of the volume of pulmonary function studies indicates that the increases are appropriate given the reasons for their use.

D. Continued Monitoring

3.2.31 Three factors are essential for monitoring the use of laboratory services: appropriate assignment of diagnostic services to individual sectors; detection of shifts in performance between sectors; and measurement of growth in services. The Advisory Committee strongly supports continued monitoring of the use of all diagnostic services, and the development and dissemination of guidelines for the most cost-effective use of such services.

E. Communication

3.2.32 There are no official mechanisms to facilitate communication across laboratory sectors or to resolve conflicts over issues such as role definition and data transfer.

3.2.33 The lack of adequate and systematic communication among the various laboratory sectors can result in duplication of services.

3.2.34 Examination results are frequently not transferred with patients, leading to increased radiation and the discomfort of performing them again. Such duplication adds to the cost of patient care. Patients may now request and receive copies of films and reports of diagnostic imaging studies. This right is limited to diagnostic imaging information and may not include other diagnostic information. In addition, placing the onus on the patient is not the most effective method of data transfer. The issue is to find appropriate procedures for transferring all patient related diagnostic data with the patient.

F. Professional Society Monitoring of Utilization

3.2.35 The Advisory Committee commends the Alberta Society of Radiologists and the Alberta Society of Laboratory Physicians for establishing subcommittees to address utilization issues. Their efforts will assist in monitoring the use of diagnostic services.

3.3 Committee's Recommendations

The reader is also referred to the Recommendations in Chapter 10 "Communications" respecting the role of the Communications and Community Advisory Committee in communicating the findings of the proposed Monitoring Committee as well as appropriate messages about the use of diagnostic facilities.

A. Roles of Laboratory Sectors

3.3.1 **Definition of Roles:** The role of each laboratory sector should be delineated, although the boundaries should not be so rigid that they preclude innovative or alternative methods of delivery (see Recommendation 12.3.1).

3.3.2 **Pathology Laboratories:** The primary roles for each pathology laboratory sector should be based on its essential services (see Recommendations 3.3.1 and 12.3.1). The primary roles are summarized as follows:

Private Laboratories	Diagnostic services to non-hospital patients.
Hospitals: University Regional Urban	Diagnostic services to hospital inpatients and outpatients. Blood transfusion services.
Hospitals: Rural	Diagnostic services to hospital inpatients and outpatients.
Provincial Laboratories	Reference microbiology. Public health services.
Red Cross Blood Transfusion Service	Blood donor services. Blood transfusion services.

(For a more complete discussion of primary and secondary roles see the Report of the Subcommittee on Laboratory Services (March 23, 1989).

3.3.3 **Diagnostic Imaging Laboratories:** The respective roles of hospital and private-practice radiology facilities should be reviewed by a committee composed of representatives of Alberta Health, the Alberta Medical Association, the College of Physicians and Surgeons (Alberta), and the Alberta Hospital Association to ensure that patient care is delivered by the most appropriate facility and to determine the most effective funding mechanisms for these services (see Recommendations 3.3.1 and 12.3.1).

B. Funding of Diagnostic Services

3.3.4 **Funding System:** An equitable and complementary funding system should be developed for each diagnostic sector.

3.3.5 **Consultation Benefit for Radiologists:** The Schedule of Medical Benefits should include a consultation benefit for radiologists to compensate them for time spent in advising clinicians on imaging and other diagnostic strategies.

C. Data Management

3.3.6 **Uniform Data Gathering Methods:** Uniform counting and recording methods should be developed for all diagnostic laboratory services, including pathology, diagnostic imaging and other diagnostic services wherever they are performed (i.e., hospitals, private laboratories, offices, provincial laboratories or the Red Cross) (see Recommendation 2.4.4).

3.3.7 **Data Linked to Physicians and Patients:** All diagnostic services, however funded, should be linked to patient, physician and Alberta Health Care Insurance Plan data in a uniform manner (see Recommendation 2.4.3).

3.3.8 **Physician and Patient Profiles:** Diagnostic service data should be compiled to create individual physician and patient profiles. Such profiles could be used by the Medical Practice and Audit Committee of the College of Physicians and Surgeons (Alberta) and Alberta Health in their examination of medical practices and use of the health care system (see Recommendations 15.3.2, 15.3.3 and 15.3.4).

3.3.9 **Transfer of Patient Data:** Alberta Health, the College of Physicians and Surgeons (Alberta), the Alberta Medical Association and the Alberta Hospital Association should determine how to ensure that films and reports of all diagnostic tests will follow the patient when the patient moves to another facility or location.

D. Continued Monitoring of Utilization

3.3.10 **Monitoring Committee:** The proposed Monitoring Committee should include the monitoring of diagnostic services within its mandate. Shifts in the use of diagnostic services among private laboratories, hospital laboratories, the provincial laboratory, and the Red Cross should be detected and quantified (see Recommendations 2.4.1).

3.3.11 **Accreditation of Pathology Laboratories:** A uniform accreditation system should apply to all four pathology laboratory sectors. The College of Physicians and Surgeons' Advisory Committee for Laboratory Accreditation and Quality

Control is already responsible for accrediting all pathology laboratories in the private and hospital sectors. Their inspection and sample checking programs could be extended to include the provincial laboratories and the Red Cross Blood Transfusion Service provided each sector was represented on the advisory committee (see Recommendation 5.4.7 and 5.4.8).

E. Communication

3.3.12 **Inter-sector Pathology Committee:** An committee with representatives from each of the four pathology laboratory sectors should be appointed to advise Alberta Health on continuing developments within the entire pathology sector. This committee would assist with problem solving and communication within and among sectors.

F. Regional Hospitals Shared Laboratory Services

3.3.13 **Regional Laboratory Services:** Alberta Health should continue to implement proposals to extend shared laboratory services through regional hospitals (For a discussion see Report Of The Subcommittee On Laboratory Services, March 1989).

3.3.14 **Other Regional Services:** The concept of shared regional services between hospitals should not be limited to laboratory services but should be expanded to include other hospital services.

G. Recommendations Regarding Specific Diagnostic Services

3.3.15 **Progressive Thyroid Profile:** The progressive thyroid profile for thyroid disease screening should be adopted.

3.3.16 **Cholesterol Guidelines:** The recommendations of the 1988 Canadian Consensus Conference on cholesterol monitoring should be adopted in Alberta as guidelines for determining risk of coronary artery disease.

3.3.17 **Lipoprotein Electrophoresis:** Lipoprotein electrophoresis should no longer be used as a screening procedure for coronary artery disease. This should be replaced by the procedures recommended by the 1988 Canadian Consensus Conference.

4.0 Consultations[7]

In the Schedule of Medical Benefits the category of consultations was identified as an area of concern because of its rapid growth. From 1983 to 1988, the average annual increase in the number of consultations grew faster than all others, except the miscellaneous category (see Table 5.1 and Figure 1.2, Chapter 1).

In the year ending March 31, 1988, consultations represented 3.2% of total medical services and 8.1% of amounts paid by the Alberta Health Care Insurance Plan for Alberta residents (see Table 5.1). From 1984 to 1987 the number of consultation services increased annually by an average of 6.7%. However, the increase from 1987 to 1988 was only 1.5% (see Table 5.1). When adjusted for the increase in the number of insured persons, the average annual increase in consultations from 1984 to 1987 was 6.4% and 0.9% in 1988.

4.1 Committee Activities

4.1.1 The Advisory Committee, with the assistance of a medical student from the University of Alberta, prepared and analyzed a statistical study of Alberta Health Care Insurance Plan data on the use of consultation fee codes between 1982 and 1987. (See Increase In Consultations In Alberta, August 1988.)

4.1.2 An article has been published in the *Alberta Doctor's Digest*, on the findings of the consultation study including guidelines for the use of consultant services, entitled "Advisory Committee Looks At Consultations," by Dr. C.B. Hatfield, July/August, 1989.

4.2 Issues

4.2.1 What factors appear to have affected the substantial increase in the use of consultation fee codes?

4.2.2 What can be done to stabilize the increase in consultation services?

4.3 Committee's Observations and Conclusions

The statistical study on the use of consultation fee codes between 1982 and 1987 (see 4.1.1) led to the following conclusions:

4.3.1 The increased use of consultations appears to be the result of many factors.

4.3.2 Consultations are physician controlled since a physician-to-physician referral is required. However, the Advisory Committee suspects that some of the increase may be due to requests for referrals and second opinions from increasingly sophisticated patients. The 1985 Utilization Committee report suggested that figures for "office visits" were good indicators for patient-initiated use of

[7] The tables relating specifically to "Consultations" are attached in Appendix 5.

medical services. During the five-year period under study, office visits increased annually by 6.3%. The rate of general practice generated referrals has increased from 71% to 74%. On this basis, 84% of the increase in consultations may be explained by the increase in office visits.

4.3.3 Another factor which may explain the increase in consultations is the increase in major surgery, averaging 3.5% a year (see Table 5.1). This is because surgeons and anesthetists often request a pre-operative consultation.

4.3.4 Increases in consultations have been affected by the growth in the number and kinds of specialists in Alberta throughout the 1980s, especially in disciplines where they had previously been in short supply. Since specialists are more available, it is easier to obtain consultation services (see Table 5.3(a)).

4.3.5 During the period 1984/85 to 1987/88, the average number of consultations increased by 5.2% annually (see Table 5.3(c)). However, the average annual rate of increase in the number of consultations per practitioner was only 0.9% (see Table 5.3(b)).

4.3.6 The aging of the Alberta population has also affected the increase in the use of consultation services. The percentage of patients over the age of 65 has increased from 7.9% in 1982/83 to 9.0% in 1987/88 (see Table 5.4). The elderly contribute to increased use of medical services generally and to consultations specifically. The elderly tend to be afflicted with more medical conditions requiring major surgery. In 1988, there were 746 consultations per 1000 insured persons for those over the age of 65, as compared with 349 consultations for all age groups (see Table 5.5).

4.3.7 Data from the Foothills Hospital in Calgary and the Misericordia Hospital in Edmonton demonstrate that hospital consultations have either held steady or have declined modestly over the five-year period (see Table 5.6). Shorter hospital stays may have resulted in increased consultations prior to admission rather than in-hospital consultations.

4.3.8 The average annual rate of increase in intra-specialty consultation for the years ended March 31, 1985, 1986, 1987 and 1988 was 2.8% (see Table 5.7). However, there were notable differences in the rate of use of inter- and intra-specialty consultations across the different disciplines (see Table 5.8).

4.3.9 From April 1, 1985 to March 31, 1988 practitioners showed an increasing tendency to bill for major and repeat consultation codes and a decreasing use of the minor and other consultation code categories (see Table 5.8).

4.3.10 A number of other factors may have contributed to the increase in consultations but data was either unavailable or inconclusive.

i. The proliferation of walk-in clinics may have an effect on increased utilization.

ii. An increasingly litigious environment in Alberta may have created an impetus for "defensive medicine" and the generation of unnecessary services.

iii. There was little increase in the fee schedule during the years 1983 to 1986. This may have caused some family physicians to refer patients with complex problems to consultants rather than manage the patients themselves. Some patients are time-consuming to treat; referrals make a higher fee available to the specialist.

4.3.11 There has been a substantial increase in specialization, subspecialization and superspecialization in medicine. The trend towards superspecialization has been particularly evident in internal medicine. The current AHCIP classification system cannot easily track the changing utilization patterns of specialists. Consultations are the major service provided by internists and are roughly equivalent to procedures performed by surgeons. Because internists provide the greatest number of consultations, they must be identified by their subspecialty if consultation use is to be monitored effectively.

4.3.12 The nature of the various types of consultations is not well defined in the AHCIP fee schedule for monitoring purposes. Future monitoring activities can be improved with clearer definitions of consultations and of the institution of new consultation categories such as "preoperative consultation" and the elimination of "mandatory consultations."

4.4 Recommendations

4.4.1 **Definitions of Consultation Categories:** Clear definitions of various consultation categories should be developed for the Schedule of Medical Benefits and a new category for preoperative consultations should be added (see Recommendation 13.3.3).

4.4.2 **Classification of Internal Medicine Services:** Services provided by specialists in internal medicine should be reclassified in the claims system according to the subspecialist categories recognized by the Alberta College of Physicians and Surgeons (see Recommendation 13.3.3).

4.4.3 **Concurrent Fee for Family Physician and Specialist Care:** Alberta Health and the Alberta Medical Association should consider a concurrent fee for family physician and specialist care in hospital (see Recommendation 13.3.3).

4.4.4 **Monitoring Committee:** Responsibility for the monitoring of consultations should be assigned to the proposed Monitoring Committee, which will provide feedback to the medical profession on the use of consultant services (see Recommendation 2.4.1).

4.4.5 **Continuing Medical Education:** Physicians and their associations should be encouraged to offer continuing medical education programs and articles in various publications to provide clearer guidelines for work-up of specific patient problems, including suggestions on when to obtain specialist assistance (see Recommendations 9.4.1 and 9.4.2).

4.4.6 **Research On Consultations:** Research should be undertaken and funded into why physicians obtain consultations, the appropriateness of consultation requests, and approaches to changing the behaviour of physicians who provide excessive referrals for consultations (see Recommendation 9.4.2).

4.4.7 **Elimination of Mandatory Consultations:** All mandatory consultations should be eliminated from the regulations under the Hospital Act .

5.0 Ambulatory Care

"Ambulatory Care" is the mode of service delivery that requires patients to ambulate to the health service location and leave on the same day, after receiving care. It therefore excludes inpatient care and home care. Ambulatory care may be grouped into four main categories:

a) Hospital-based outpatient services:
- Emergency departments
- Specialty outpatient clinics

b) Hospital-affiliated freestanding clinics
- Family practice clinics
- Specialty ambulatory clinics

c) Independent (non-hospital), not-for-profit free standing clinics.
- Community health centres
- Public health clinics
- Mental health clinics

d) Independent, for-profit clinics:;
- Physician practices (solo or group)
- Group practices/medical centres
- Extended hour "walk-in" clinics
- Surgical centres
- Diagnostic clinics/centres (radiology, pathology, electro-diagnostics, etc..)

Until the 1970s there had been a trend towards centralizing medical care in an inpatient setting. However, ambulatory care has been accepted as a cost-efficient alternative. Technological improvements have allowed many forms of care that could formerly be provided safely only in hospitals to be offered in the outpatient setting. For some procedures, ambulatory care improves accessibility, responsiveness and quality of care.

5.1 Committee's Activities

5.1.1 The Advisory Committee reviewed the questions and concerns about "walk-in" clinics. There has been some suggestion that the increased number of primary care visits is related to the emergence of walk-in clinics. The committee examined data provided by Alberta Health with respect to primary care visits and walk-in clinics and held interviews with physicians practicing in conventional general practice, walk-in clinics, and emergency rooms.

5.1.2 The Advisory Committee supported an "emergency department utilization" pilot study under the direction of Dr. Preston Wiley and Dr. Bruce Mohr of the Department of Family Medicine, University of Calgary. The pilot examined the extent of double-doctoring by patients who use emergency department facilities at three selected Calgary hospitals.

5.1.3 The Advisory Committee reviewed and commented upon a discussion paper prepared by Alberta Health entitled, "Ambulatory Care Services In Alberta: Issues And Policy Considerations."

5.1.4 Following a request from the Minister of Health, the Advisory Committee reviewed the provision of emergency services in the City of Calgary. In particular, the committee looked into community concerns about emergency services at the Peter Lougheed Centre. A report has been submitted to the Minister.

5.2 Issues

5.2.1 Many physicians have expressed concern that the remuneration for providing high-volume care to patients with minor illnesses may be too high for the time and skill required. (See Utilization of Medical Services and Walk-In Clinics, April 1989).

5.2.2 Given the trend towards ambulatory care, Alberta Health must develop consistent policies and processes for approval and funding of such programs. Major policy considerations must be addressed in light of both the *Canada Health Act* and increasing demand for these types of services.

5.2.3 After-hours medical care has traditionally been provided by hospital emergency departments. The advent of walk-in clinics and other types of practices with extended hours has reduced the use of highly sophisticated emergency departments by patients with minor illnesses. At the same time, emergency medicine has evolved into a specialty recognized by the Royal College of Physicians and Surgeons. The skills of these specialists are now focused on pre-hospital care and early management and stabilization of acutely ill patients. These changes suggest that we need to re-think the number of emergency departments and the types of care they provide, in the light of the less costly alternatives now available.

5.3 Committee's Observations and Conclusions

A. Review of Walk-in Clinics

5.3.1 The Advisory Committee concluded that it is difficult to identify distinguishing characteristics of walk-in clinics compared with traditional family practices in today's environment. Increasingly, family physicians in conventional practice are offering extended hours and no appointment service, as do walk-in clinics. Walk-in clinics are not currently regulated and the Advisory Committee concluded that it is unlikely that such regulation can be achieved.

5.3.2 The Advisory Committee concludes that walk-in clinics have contributed to increased use of health care as measured by the increased primary care visits and billing recorded by Alberta Health. At the same time, however, the slower increases in the use of hospital emergency departments suggests that many minor illnesses formerly seen in hospital emergency departments are now being assessed and treated in walk-in clinics.

5.3.3 Many primary care visits to physicians are for minor, self-limiting illness. Such illnesses often require no medical treatment and the visit brings no measurable benefit to the patient. "Convenience medicine" is a response to patient demand for unlimited and immediate access to physicians. This cannot be controlled without limiting a patient's right to choose. The Advisory Committee concluded that strategies must attempt to control the costs of all primary care visits, not just those that occur in walk-in clinics.

B. Study of Patient use of Emergency Departments

5.3.4 The study by Dr. Preston Wiley and Dr. Bruce Mohr of the Department of Family Medicine, University of Calgary, is based on a comprehensive questionnaire given to patients visiting three hospital emergency departments in Calgary. The purpose was to study those patients who had consulted another physician within the three days preceding their visit. Of the emergency room patients surveyed, 61% initiated the visit themselves, while 16% were referred by a physician.

5.3.5 Of the patients surveyed, 21% had seen another physician for the same medical problem within 72 hours of their emergency visit. Half of this group had seen the second physician within 24 hours. The most common reasons given for the second visit were that they were getting worse (43%) or they were not getting better (26%).

5.3.6 The authors concluded that the costs of "double doctoring" could be significant. This is an issue that should be examined further.

C. Review of Alberta Health's paper entitled "Ambulatory Services in Alberta: Issues and Policy Consideration"

5.3.7 The Advisory Committee concluded that Alberta should continue to encourage a shift from hospital-based inpatient care to ambulatory care, provided patient safety and economy can be assured. Use of specific incentives is the most desirable approach.

5.3.8 Alberta Health should initiate discussions with organizations such as the Alberta Hospital Association, the Alberta Medical Association, the College of Physicians and Surgeons (Alberta), the Health Unit Association of Alberta and other relevant organizations regarding those services which can safely and economically be provided in the ambulatory setting. Accreditation and approval processes must be put into place to ensure quality service, patient safety and financial control.

5.3.9 Improved information systems are needed to monitor shifts from inpatient to ambulatory care settings and to permit planning and monitoring of ambulatory care. There is currently no comprehensive information on where medical care is provided in Alberta. Procedures are therefore needed to register all medical care facilities.

E. Emergency Medical Care

5.3.10 Traditional thinking about the full-service general hospital is changing in response to clinical realities and economic conditions. It was once assumed that every hospital would operate an emergency department. However, with the advent of alternatives such as extended hour clinics, this need not be the case. At the same time, it has been recognized that life-threatening illnesses are best treated by skilled teams with enough experience to maintain their critical care skills. To gain that experience, the teams need to see high volumes of patients in an emergency ward-type setting.

5.3.11 The Minister of Health asked the Advisory Committee to examine the emergency medical services in the City of Calgary and to respond to community concerns regarding the Peter Lougheed Centre of the Calgary General Hospital. The Advisory Committee has concluded that there are probably too many emergency departments in both Calgary and Edmonton. Several related issues require further study: the relationship of hospital emergency departments to the role of general hospitals; the role of the emergency departments in all hospitals; and the standards of the emergency departments in all hospitals.

5.4 Committee's Recommendations

A. Walk-In Clinics

5.4.1 **Monitoring Committee:** Responsibility for the monitoring of primary care visits should be assigned to the proposed Monitoring Committee. Alberta Health requires the data to refine the office visit fee codes so they better reflect the time, skill and overhead required. As well, the data may help explain the reasons for the extensive use of primary care in Alberta (see Recommendation 2.4.1).

5.4.2 **Relationship between Income and Use of Medical Services:** A study should be undertaken to establish the relationship between income levels and medical care use. If a significant relationship exists between income levels and health care use then appropriate strategies should be developed to improve the provision of medical care for low-income Albertans.

5.4.3 **Identification and Education of High Use Consumers:** Alberta Health should find a way to identify registrants who are high users of medical services for minor complaints and target an education campaign to these registrants. One possible approach might be for Alberta Health to identify, through AHCIP data, patients who see different physicians multiple times within a limited time period. Those registrants could be sent information about the cost of the services they have used and how to use the health care system more appropriately (see Recommendations 9.4.1 and 9.4.2).

5.4.4 **Funding Incentives:** Alberta Health should consider approaches such as the use of financial incentives and disincentives that encourage responsible use of the health care system (see Recommendations 12.3.7, 13.3.4, 14.2.7 and 16.3.4).

B. Research on the Role and use Emergency Departments

5.4.5 **Research Into Emergency Departments:** The following issues should be examined more thoroughly:

i. Patient use of emergency departments;

ii. The role of emergency departments in all hospitals;

iii. The standards of emergency departments in all hospitals.

C. Ambulatory Care Service in Alberta

5.4.6 **Shift Inpatient Services to Ambulatory Care:** Alberta Health should encourage a shift from inpatient to ambulatory care, where clinically appropriate and economically desirable. Various models for ambulatory care delivery should be investigated.

5.4.7 **Registration of Health Facilities:** All facilities in which practitioners provide health services that are funded directly or indirectly by Alberta Health should be registered. Data required for registration should include the address, owner/operator information, names of physicians using facilities, hours of operation and any other information considered necessary by Alberta Health. This would include all physicians' offices; ambulatory care facilities and surgical centres; laboratories, including specimen collection facilities; and diagnostic radiology facilities, among others.

5.4.8 **Accreditation of Health Facilities:** An accreditation process and accreditation standards for all health facilities and services should be developed by the College of Physicians and Surgeons (Alberta) for facilities providing advanced services such as major endoscopic procedures and surgical procedures. This represents an extension of the accreditation process already carried on by the College. It would include services requiring major tray service fees, diagnostic services, and so forth.

5.4.9 **Funding of Health Services:** In order for health care professionals to be reimbursed through the AHCIP's claims process their services must be delivered in an accredited facility that has been approved by Alberta Health. Some facilities such as hospitals can be approved for a wide variety of health services, others such as vasectomy clinics would be accredited and approved for highly specific services. Approval would allow for funding which might take the form of a comprehensive fee including professional and overhead compensation for individual services or, in some circumstances, facility fees intended to cover capital and operating costs.

D. Emergency Medical Services

5.4.10 **Report on Emergency Services in the City of Calgary:** The Advisory Committee has recommended, in a separate report to the Minister of Health, that the number of full-service emergency departments in the City of Calgary be reduced to three plus the emergency department at the Alberta Children's Hospital. A similar study of emergency departments should be undertaken for the City of Edmonton to determine the number required in that city.

5.4.11 **Urgent Care Centres:** Where emergency departments are eliminated from existing hospitals, it is recommended that such hospitals operate "urgent care centres" staffed by family physicians. These would provide for 24-hour assessment and treatment of minor and moderate illnesses. Such facilities would not receive ambulances or major trauma patients. They would be introduced with an educational campaign to ensure their role is made clear to the communities they serve.

6.0 Minor Surgery[8]

The Advisory Committee was specifically asked to look at minor surgery procedures and to recommend ways of controlling increases in utilization.

6.1 Committee Activities

6.1.1 Using data provided by AHCIP the Advisory Committee analyzed trends in minor surgery procedures from 1985 to 1988.

6.2 Issues

6.2.1 What are the reasons for a sudden "leveling off" in the rate of increase of minor surgery.

6.3 Committee's Observations and Conclusions

6.3.1 During the five year period studied by the 1985 Utilization Committee the use of minor surgery services increased by 35%. When related diagnostic services (for example skin biopsies) and tray fees were added the increase in use was 100%.

6.3.2 During the period 1984-85 to 1987-88 there has been a 8.2% decrease in minor surgery. When the other services are calculated within an expanded minor surgery category the decrease is 9.6% (see Table 6.1). During this time, some minor surgery services were deinsured; however, even when these services are taken into account there is still a small decrease.

6.3.3 The Advisory Committee is not able to identify the factors which might have caused this sudden leveling off in what was previously a rapid increase in utilization.

6.4 Recommendation

6.4.1 **Monitoring Committee:** The proposed Monitoring Committee should analyze minor surgery in order to identify shifts in activity and the reasons for those shifts. It should make recommendations for necessary changes (see Recommendation 2.4.1).

[8] The tables relating specifically to "Minor Surgery" are attached in Appendix 6.

7.0 Office Visits[9]

Office visits are defined as patient visits to physicians on a non-referred or non-consultant basis. They are grouped into three categories. The first implies a major assessment for a serious illness and requires a complete history and physical examination of all major systems including a venipuncture. The second category is described as a first visit for a new illness requiring only a limited history and physical examination and implies a less serious or minor problem. The third category comprises subsequent or follow-up visits.

For the year ending March 31, 1988 office visits comprised 40.6% of total medical services and 39.7% of amounts paid by AHCIP for services provided to Alberta residents (see Table 4.6). It is the single largest category of medical services paid to physicians through AHCIP and is, therefore, worthy of review.

7.1 Committee Activities

7.1.1 Using data provided by AHCIP the Advisory Committee analyzed trends in office visits from 1984 to 1989.

7.1.2 The Advisory Committee reviewed the analysis of consultations (see Chapter 4 "Consultations," 4.3.2) which indicated that up to 84% of the increase in consultations may potentially be explained by the increase in office visits.

7.1.3 The Advisory Committee reviewed the report of the sub-committee on Ambulatory Care (see Chapter 5), especially in those areas related to primary care.

7.2 Issues

7.2.1 What factors appear to have affected the substantial increase in office visits?

7.2.2 What can be done to stabilize the percentage increase in office visits?

7.3 Committee's Observations and Conclusion

7.3.1 For the year ending March 31, 1989, the Alberta Health Care Insurance Plan made payments for 9,427,164 office visits. Of these approximately 10% were in the complete examination category, 70% in the limited examination category and 20% were follow-up visits (see Table 7.1). Overall 87% of office visits were to family and general practitioners, and 13% to specialists on a non-referred basis (see Table 7.2).

7.3.2 Between 1984 and 1987, the number of office visits increased by an average of 6.1% per annum. However, between 1987 and 1988 the increase was 0.96% (see Table 5.1). Preliminary estimates for 1989, on a date-of-payment basis suggests, that the slower trend noted in 1987-88 is continuing.

[9] The tables relating to "Office Visits" are attached in Appendix 7.

7.3.3 Detailed analysis of date-of-payment statistics indicates that the increase in office visits is due to increases in the minor illness and subsequent visit categories (see Table 7.3). Complete examinations appear to be increasing over the past two years, but breakdowns by specialty groups indicate that complete examinations are actually decreasing for all disciplines except for ophthalmology and pediatrics (see Table 7.4). There is also an increase in the "other" category, which reflects office visits recorded by emergency and laboratory physicians, but the numbers are very small, representing only 0.4% of total complete examinations (see Table 7.2).

7.3.4 The increase in office visits to ophthalmologists reflects the 1987 amendments to the Schedule of Medical Benefits in which routine eye examinations, that were not medically required, were removed as an insured benefit for persons aged 19 to 64 years. Prior to August 1, 1987, routine eye examinations were billed as procedures, rather than as office visits. The growth in office visits to ophthalmologists reflects the increase in the number of medically required eye examinations. This increase does not represent new ophthalmology services but reflects a recategorization of eye examinations from procedures to the category of office visits. One can be misled by a simple reading of statistical data, without knowledge of changes to categorization or counting procedures.

7.3.5 Pediatricians appear to be modifying their practice patterns. They appear to be increasing their primary care activities, with greater numbers of non-referred office visits and follow-up visits.

7.3.6 Family and general practitioners are seeing fewer new illnesses requiring a complete history and physical examination, but are seeing increasing numbers of patients with minor complaints requiring only a limited history and physical examination. There are several possible reasons for this change. Patients may be seeking medical attention for less serious complaints as a result of better public awareness of health issues. The increased availability of physicians through "walk-in" -clinics and extended hours of operation in individual physician offices may have an effect. There may also be a changing philosophy and pattern of practice in doctors' offices, with greater emphasis being placed on quick interventions. Finally, it has been suggested that the fee schedule does not make it profitable to deal with multiple complaints in one session. This provides an incentive for repeat visits to deal with additional health problems.

7.4 Recommendations

The reader is also referred to Chapter 4, "Consultations," Recommendations 4.4.4 to 4.4.7 and Chapter 5, "Ambulatory Care," Recommendations 5.4.1 to 5.4.4.

7.4.1 **Monitoring Committee:** The proposed Monitoring Committee should continue to analyze the "office visits" category according to physician groups. The committee should review shifts in activity and recommend necessary changes (see Recommendation 2.4.1).

8.0 Manpower[10]

The Advisory Committee's mandate included reviewing physician manpower statistics and their relationship to health care utilization and costs. The committee was also asked to advise on strategies for achieving the optimal number and distribution of physicians in Alberta.

To analyze the impact of physician numbers on the use of medical services, it is essential to know accurately how many physicians are practicing in each discipline and where they are located. It is also necessary to understand the nature of their professional activity. Physician manpower planning requires a valid and reliable data base. It has been extremely difficult to obtain reliable information, although several organizations have reported "counts" of Alberta physicians. It is important to understand the variances among data bases. It is equally important not to accept one arbitrarily as being accurate, but to use the most appropriate data base for the specific questions being asked.

8.1 Committee Activities

8.1.1 The Advisory Committee obtained data on Alberta physicians from the Canadian Medical Association which recently conducted a count of all physicians in active practice in Canada as of December 31, 1986. (This study was conducted in conjunction with the Royal College of Physicians and Surgeons of Canada, the National Specialty Societies, and the College of Family Physicians of Canada.) This basic list was substantially upgraded. Duplicate names, and the names of retired physicians, or physicians practicing outside Alberta were removed; missing names were added; and physicians were classified according to their correct discipline. This upgraded list is known as the Alberta Data Base, 1986.

8.1.2 The Alberta Data Base 1986 was compared with counts from other sources: National Health and Welfare (NHW), which in turn is derived from the Southam Data Base; the College of Physicians and Surgeons of Alberta (CPSA), and the Alberta Health Care Insurance Plan (AHCIP).

8.1.3 The Alberta Data Base 1986 was used to calculate the distribution of physicians by discipline, geographic area, age, and sex. Physician to population ratios were calculated and compared to available national statistics.

8.1.4 The Advisory Committee reviewed the current status of attempts in British Columbia to control physician manpower by legislative means.

[10] The tables relating specifically to "Manpower" are attached in Appendix 8.

8.2 Issues

8.2.1 What is the relationship between physician numbers and utilization of medical services?

8.2.2 What parameters should be used to define the optimal numbers and distribution (by geography and specialty) of physicians in the province? What criteria should be used to identify requirements?

8.2.3 Accepting the theory of "physician-induced demand," several provincial governments have expressed interest in controlling the supply of medical manpower as a means of containing health care costs. These approaches have included: decreasing the number of places in Canadian medical schools, restricting funding of postgraduate residency training positions; decreasing immigration of foreign physicians; and controlling billing numbers. The most controversial control measure to date has been British Columbia's legislation to control the issuance of billing numbers by its health care insurance plan. This legislation has been declared unconstitutional by the British Columbia Court of Appeal. The issue is whether legislation or regulation is a useful means of controlling physician manpower.

8.3 Committee's Observations and Conclusions

A. Alberta Data Base, 1986

8.3.1 Although some adjustments may still be necessary, the most current information indicates 3,385 physicians were practicing in Alberta on December 31, 1986. Of these, 1,625 (48%) are specialists, and 1,760 (52%) are general or family practitioners (see Table 8.1). In this census, physicians were categorized into various disciplines by their major activity rather than by their specialty degrees or qualifications.

8.3.2 Not all physicians in Alberta are in full-time practice. A number of physicians do not bill AHCIP since they are in salaried or institutional positions, others have major administrative or research responsibilities, while others are in practice part-time or work solely in locum situations. Some 321 physicians (9.5%) fall into these categories, although this number probably represents a minimum estimate. This leaves 3,064 physicians in full-time practice in Alberta as of December 31, 1986 (see Table 8.2).

8.3.3 Population-to-physician ratios of family and general practitioners and specialists were calculated by geographic regions (see Table 8.3). There is a reasonable distribution of general and family practitioners in rural Alberta in comparison with Edmonton and Calgary. Specialist-to-population ratio is similar in Red Deer, Calgary, Lethbridge, and Edmonton. Camrose, Medicine Hat, Drumheller, Grande Prairie and Fort McMurray appear to have a reasonable number of specialists as well.

8.3.4 Women physicians represent 16.7% of all Alberta physicians. The percentage is higher among family and general practitioners (21.6%) than in the specialty group (11.4%).

8.3.5 The median age of all specialists in Alberta in 1986 was 45, while for general and family practitioners it was 39. Median age for women specialists was 37, and 35 for family and general practitioners. Highest median ages were 54 for medical genetics; 51 for cardiovascular/thoracic surgery and general surgery; 50 for ophthalmology; 49 for general internal medicine and general pathology; and 48 for community medicine and medical microbiology.

8.3.6 The 1986 Alberta Data Bank includes 69 physicians over the age of 70 and another 122 between 65 and 69. There are 238 between the ages of 60 and 64 and 329 between 55 and 59. Assuming that many individuals over 65 will retire soon and that others will retire around 65 in the future, estimated average attrition from retirement alone will be around 70 per year for the next 20 years, and 100 per year thereafter.

B. Comparison of Different Databases

8.3.7 The Alberta Data Base includes 3,385 physicians practicing in Alberta on December 31, 1986. For the same date, National Health and Welfare reports 3,650, while the College of Physicians and Surgeons (Alberta) reports 4,023. The Alberta Health Care Insurance Plan reports 3,676 between April 1, 1986 to March 31, 1987 (see Table 8.4). These variations are not unique to one year but show consistent discrepancies through the years 1984 to 1988 (see Table 8.5).

8.3.8 The methodology used to arrive at these counts and the purpose of the counts may explain some of the discrepancies. For one thing, while the first three counts were done for a specific day, AHCIP reports a cumulative 12-month count of physicians who billed the health care system during that fiscal year. Since there are movements into and out of the province during that fiscal year, the cumulative count would be higher. In addition AHCIP does not count physicians who do not bill the health care system (such as community medicine, medical genetics, or radiation oncology) or those who are salaried, while the other data bases do include these physicians. Where physicians bill as a group (such as Laboratory Medicine) the AHCIP system counts them as a single unit (see Table 8.4).

8.3.9 The Alberta Data Base reports numbers for the various disciplines according to function, while the other data banks use specialty qualifications to determine disciplinary affiliation. In some disciplines, the counts are relatively close, but in others there are wide discrepancies (see Table 8.4). Some variation can be explained by the fact that family physicians who predominantly practice emergency medicine are classified as specialists in the Alberta Data Bank, while others list them as general or family practitioners.

8.3.10 The discrepancy between the Alberta Data Bank and that of the College of Physicians and Surgeons (Alberta) appears to be centred on the count of physicians in Edmonton and Calgary and further analysis is needed to understand it. Some factors that may inflate the CPSA numbers include: physicians who are on the Educational Register but who are fully qualified for the full register during their residency, retired and temporary physicians, and physicians who moved in or out of the province close to the validation date.

8.3.11 Of the 3,676 physicians who billed AHCIP in 1986-87, 3,171 billed more than $20,000, and 2,940 more than $40,000 for the year. Although there may not be complete individual correlation, the number of physicians earning more than $30,000 per year represent the permanent full-time practitioners in the province by eliminating those who are transient, part-time, or working locums, administration or research (see Table 8.4).

C. Optimal Physician Numbers and Distribution

8.3.12 On January 1, 1987, Alberta's population represented 9.3% of the population of Canada. Alberta physicians accounted for 7.3% of Canada's specialists and 8.3% of Canada's family and general practitioners (see Table 8.1).

8.3.13 Although there is no accepted formula for calculating how many physicians are needed, the Alberta numbers can be compared to those for the rest of Canada by using population-to-physician ratios. This ratio in itself has less inherent validity than is attributed to it by many health economists but it can be useful for comparative purposes. As of December 31, 1986 the population-to-physician ratio for specialists in Alberta was 1,450. There was one specialist per 1,450 Albertans. For family and general practitioners, the ratio was 1,350, while for all physicians it was 700. This compares with ratios for the country as a whole of 1,150 (specialists), 1,200 (family and general practitioners) and 590 (all physicians). National Health and Welfare reports indicate that several regions of Canada had higher population-to-physician ratios for all physicians and specialists in 1986 (and similarly on December 31, 1988). These included Newfoundland, Prince Edward Island, New Brunswick, Saskatchewan, Yukon, and Northwest Territories. Regions with fewer family and general practitioners per population in 1986 included New Brunswick, PEI, and Northwest Territories. In 1988 Manitoba also joined this group. Relatively speaking, it is difficult to conclude that Alberta is overpopulated by physicians.

8.3.14 As of December 31, 1986, a number of specialty groups were well represented in Alberta in comparison to other parts of Canada. These include general internal medicine, infectious diseases, medical oncology, emergency medicine, general pathology, neuropathology, hematopathology, medical biochemistry, medical genetics, radiation oncology, and cardiovascular and thoracic surgery (see Table 8.1). Specialists in relatively short supply include geriatric medicine, hematology, clinical immunology and allergy, physical medicine and rehabilitation, psychiatry, urology and dermatology.

8.3.15 Planning for the optimal number and distribution of physicians cannot be done in isolation. It must be coordinated with those of other health care providers, taking into account the interdependent and independent roles of various health care professionals.

D. Controlling Physician Manpower by Legislation

8.3.16 British Columbia's legislation to limit billing numbers and to impose conditions on physicians who were granted billing numbers included restrictions on where physicians may practice. The British Columbia Court of Appeal found this legislation violated the physicians' rights to fundamental justice. While this decision is not binding on other provincial jurisdictions, it sets a precedent for courts across the country and will likely discourage this kind of legislation in Canada.

8.3.17 Information about numbers and activity levels of physicians in Alberta is not sufficient for manpower planning. This situation is common in all provinces. Moreover, in recognition of both the reality and the legal concept of mobility rights, measures invoked to control medical manpower in one province are unlikely to be successful unless adopted by all provinces.

8.3.18 If, upon analysis of appropriate data, Canadian provinces find there is a need to restrict the supply of medical manpower, careful thought must be given to the level at which controls should be applied. The Advisory Committee agrees with Eva Ryten[11] that application of controls at the level of medical school enrollments is inappropriate and generally an ineffective means of controlling manpower. Manpower controls are better placed elsewhere.

E. Relationship Between Numbers of Physicians and Use of Medical Services

8.3.19 The number of physicians who bill AHCIP has continued to increase since 1980 at an average annual rate of 4.4%, although the increase from 1988 to 1989 was only 2.0% (see Table 4.1). This means that the use of medical services declined in 1987-88 and 1988-89 in spite of an increase in the number of physicians.

8.3.20 The growth in number of physicians varies from discipline to discipline. Detailed examination of individual disciplines does not necessarily support the hypothesis that increased use is directly related to increased numbers of physicians.

8.4 Recommendations

The reader is also referred to the discussion on Manpower in Chapter 20, "Manpower/Planning."

8.4.1 **Advisory Committee on Health Manpower Studies:** An Advisory Committee on Health Manpower Studies should be appointed and funded by the Alberta departments of Health, Career Development and Employment, and Advanced Education. The Advisory Committee would give direction to the Centre for Health Manpower Studies and would work with all health occupations in Alberta.

8.4.2 **Centre for Health Manpower Studies:** A Centre for Health Manpower Studies should be established to monitor manpower supply and develop new and accurate manpower measurements. The Centre would also determine factors influencing manpower shifts, and examine worker productivity. It could provide independent statistical and data base services to all health disciplines.

8.4.3 **Manpower Target Committees:** Alberta Health, in consultation with stakeholder groups should establish a committee for each health discipline. These committees would help establish and achieve manpower targets. They should be composed of a mix of individuals from government, health disciplines, the educational institutes, and the principal employer groups. Compensation issues will be outside of their mandates.

8.4.4 **Re-examine the Relationship Between Physician Manpower and Use of Health Care Services:** The notion that increased use of services is due largely to increased physician numbers should be re-examined in the light of diverging trends in the two issues during the last two fiscal years. Physician numbers and utilization should be examined according to each subspecialty or disciplinary group rather than using aggregate data.

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[11] "Location of Medical Schools: Impact on Physician Manpower Planning" in *Physician Manpower in Canada, Proceedings of the First and Second Annual ACMC Physician Manpower Conference,* Ed. M. Watanabe, Association of Canadian Medical Colleges, 1988, pp. 83–112.

8.4.5 **No Action on Physician Supply:** Since the cause-and-effect relationship between physician manpower and health care use has not been established no new action should be taken to limit physician supply or to control billing numbers.

8.4.6 **Rural Alberta:** The medical profession, medical schools, and governments should continue to study the needs of rural Alberta and recommend actions to help ensure that Alberta citizens receive cost-effective, high-quality health care in a timely fashion regardless of their geographic location. Special attention should be paid to the problem of transportation and communication between urban and rural Alberta (see Recommendation 12.3.10).

9.0 Communications

An effective communications strategy is essential in any effort to change the way both providers of health care services and the clients of those services use the health care system. The abuse, misuse, and overuse of medical services are often due to ignorance of such matters as cost, availability, and alternative modes of service. By providing pertinent and accurate information through appropriate media, Alberta Health can give target groups — both health care professionals and health care recipients — a means to modify their behaviour.

In order to make informed decisions about their own health and health care, Albertans need access to the right information. In addition, health professionals need to be informed of the needs and resources of the health care system; their patterns of practice must be sensitive both to the needs of their individual patients and to the system as a whole. Health care information may come from many sources, including: Alberta Health, the Alberta Medical Association, the Alberta Hospital Association, the College of Physicians and Surgeons (Alberta), the Health Unit Association of Alberta, medical schools and the media.

At present, there are enormous gaps in the availability of quality information. Alberta Health needs to coordinate and assess methods of delivering that information. This committee endorses the 1985 Utilization Committee's recommendation that educational programs be established or enhanced for both the medical profession and the public. Through such programs a more responsible attitude toward the use of health care resources can be developed.

9.1 Committee Activities

9.1.1 The Advisory Committee met with Mr. Ron Kustra, Assistant Executive Director (Public Affairs), of the Alberta Medical Association and produced an article for the *Alberta Doctor's Digest* outlining the make-up, the Terms of Reference and aims of the committee.

9.2 Issues

9.2.1 What are the purposes of public education, communication and community relations strategies?

9.2.2 Who needs to be provided with information about health care use?

9.2.3 What are the most appropriate communication strategies to improve attitudes and behaviour with respect to use of medical services?

9.2.4 What is the role of stakeholder and consumer groups in public education and community relations strategies?

9.3 Committee's Observations and Conclusions

9.3.1 The purpose of public education in health care is to:

i. make Albertans aware of the cost of health care;

ii. encourage appropriate use of health services and resources;

iii. support healthful choices by individuals;

iv. reinforce responsible behaviour in using services.

9.3.2 Public education should be targeted towards special need groups, taking into account their medical needs, social needs and cultural identification, geographic location, access and literacy.

9.3.3 It should not be the intent of a public campaign to lay blame or discourage Albertans from using the health care system when it is needed.

9.3.4 Public education is related to community relations. Province-wide campaigns may be the most effective methods to communicate some messages. However, community relations may be best provided locally, by those institutions that provide health care services in the community.

9.3.5 As citizens and consumers, Albertans should be encouraged to participate in the development of public education campaigns.

9.3.6 The objective of any communication strategy is to communicate with target groups. In this case they are:

i. Public policy-makers: elected representatives and officials at the federal, provincial and municipal levels who provide administrative support and who develop public policies concerning the health needs of Albertans.

ii. Boards of Trustees and administrators of health care facilities, other organizations and volunteer agencies.

iii. The Alberta public.

iv. Practitioners: individual health care providers as well as their professional associations and regulatory agencies.

v. Education institutions: Alberta primary, secondary and post-secondary institutions.

vi. Press/Media: Print and electronic reporters and editors who are a means of reaching the other target groups.

9.4 Recommendations

The Recommendations in this Chapter complement and support the communication and education activities suggested elsewhere in this Report. In particular the findings of the proposed Monitoring Committee (Recommendation 2.4.1) are to be communicated to the general public, health care practitioners and stakeholder groups.

9.4.1 **Communications And Community Advisory Committee:** A permanent public education committee, the Communications and Community Advisory Committee, should be established. This committee should have broad representation from associations representing hospitals, health units, health professionals and consumers. It should report to the Minister of Health.

The Communications and Community Advisory Committee should be a working and coordinating body. It should provide a focus for and be an advocate of good health and community involvement, as well as being a source of reliable health information. It should identify and analyze health trends. It should advise on and monitor health promotion campaigns, create greater public awareness of health costs and encourage appropriate use of health services.

The Communications and Community Advisory Committee should have a close working relationship with the Monitoring Committee; the latter would be the principal source of information about utilization patterns and trends (see Recommendation 2.4.1).

It should encourage and support educational activities provided through professional associations, through hospital, health unit, and family and community support services associations; and through special interest and support groups.

9.4.2 **Terms of Reference:** The proposed Communications and Community Advisory Committee might adopt the following within their Terms of Reference:

i. organize a speakers' bureau to provide qualified speakers and printed support material; bureau staff may assist with presentations for events such as health fairs, forums, and health promotion activities;

ii. increase public and professional awareness by developing programs that emphasize alternatives to hospitalization and the reduction of hospital stays;

iii. collaborate with appropriate professional associations to provide information about use and efficiency of health care services;

iv. publish regular columns and articles on health care utilization and cost efficiency in professional journals;

v. encourage feature writers, columnists, editorialists as well as science and medical writers to give informed analysis of utilization issues;

vi. support the inclusion of cost effectiveness and utilization issues in health-related conferences, seminars and workshops;

vii. encourage teaching facilities for health professionals to expand their curricula to include content on cost effectiveness and utilization.

viii. distribute a practitioners' profile, in an easy-to-read format, to all insured health care practitioners on a regular basis.

ix. develop and distribute a registrants' profile, in an easy-to-read format, to Alberta consumers who display unusual usage patterns.

x. carry out market and behavioral research into consumer choices relating to life-style and the use of health resources.

xi. carry our research into communication and education techniques.

9.4.3 **Funding:** The Communications and Community Advisory Committee will require sufficient resources to carry out its responsibilities effectively.

Section III: Barriers to Cost Effective Health Care in Alberta

10.0 Introduction

Alberta's health care system compares favorably to systems anywhere in the industrialized western world. Alberta offers its citizens a wide range of health care services at the lowest percentage of gross domestic product in Canada. The actual cost per capita, however, is the highest in the country. Most observers would agree that Alberta spends enough money on its health care system but that the resources need to be used more effectively.

The mandate of the Advisory Committee on the Utilization of Medical Services was to examine a variety of specific services and to make recommendations to optimize their use. However the committee found that these services could not be considered in isolation from the health care system that delivers them.

This section responds to the following term of reference:

> To propose strategies for achieving cost-efficient methods of delivering health care services that are consistent with goals for health care in Alberta.

Barriers to the most effective use of resources result from the complex interrelationships between the funders, providers, and consumers of health care services.

The Advisory Committee has identified the following impediments to prudent resource management:

1. Inadequate goals and objectives to guide the system;
2. An institutional funding system that does not promote efficiency or effectiveness;
3. A practitioner payment system that can encourage unnecessary use of services;
4. An organizational model for health services delivery that is not coordinated or integrated;
5. A lack of easily accessible, comprehensive data relating to health status and utilization;
6. An atmosphere of territoriality on the part of providers;
7. Areas of over- and under-regulation of health services;
8. Consumer behaviours that contribute to excessive use without a corresponding health benefit;
9. Inadequate evaluation and research; and
10. Inadequate manpower planning systems.

In the following report each of these barriers has been analyzed and the Advisory Committee has proposed specific measures that will, in our judgement, result in improved health services at comparable or reduced cost.

The committee recognizes that addressing each of the shortcomings identified will be a very large task, requiring considerable time, energy and funding — and in some cases, substantial political will. It is the opinion of the Advisory Committee however, that failure to begin addressing these issues now will result in the need for more draconian measures later. We are proud of our health care system and we hope that the following contribution will help make it even better.

11.0 Goals and Objectives for Alberta's Health Care System

BARRIER: Goals and objectives for the health care system are not easily identifiable. They often conflict; they have not been based on a broad consensus amongst stakeholders.

Health care organizations are increasingly aware of the need for planning tools such as a defined mission with specific goals and objectives to guide the development of programs that are rational, effective and economical. While there are implicit goals and objectives present in Alberta's health care system, the Advisory Committee and the Premier's Commission on the Future of Health Care for Albertans have both recognized that clearer articulation of the mission, goals, and objectives of Alberta's health care system is required.

11.1 Current State

The goals and objectives for Alberta's health care system are embodied in legislation, throne speeches, ministerial speeches, reports and government policy directives. There is no easily accessible document in which such goals and objectives are explicitly identified. Moreover, many of the goals and objectives are not specific enough to be used as planning and evaluation tools. The lack of broadly based agreement and uncertainty about the meaning or interpretation of such goals and objectives may lead to inconsistent application.

The Government of Alberta has recognized the need for goals and objectives. Under the leadership of the Honourable Neil Crawford, Alberta recently released a social policy statement entitled *Caring and Responsibility.*[12] The document identified four philosophical cornerstones for Alberta's social programs based on the dominant social values cherished by Albertans. These include:

- Concern for the individual;
- Faith in the individual, family, and community;
- Concern for equity and equality; and
- Concern for value-for-money.

If the principles guiding social programs are to be derived from shared social values, then the document *Caring and Responsibility* should be the foundation upon which a mission statement, principles, goals and objectives are developed for Alberta's health care system. The very development of such a document suggests a new commitment on the part of the Government of Alberta to the use of goals and objectives as a planning and guidance tool.

[12] *Caring and Responsibility: A Statement of Social Policy For Alberta,* May 28, 1988.

11.2 Work in Progress

Early in its mandate, the Advisory Committee on the Utilization of Medical Services recognized the need for clearly articulated goals and objectives to encourage rational planning, system evaluation, and assessment of cost-effectiveness for health care services. The committee has drafted specific goals and objectives, not so much as a recommendation that they be adopted, but rather as an example of format and content for such a statement.

The Premier's Commission on the Future of Health Care for Albertans has also determined that some type of directive statement is needed for the further development of the health care system. In their first newsletter (September 1988) draft Mission Statements and Principles were presented for discussion. In the apring of 1989 a revised draft Mission Statement, Principles and Elements (Goals/Objectives) were released for further comment.

11.3 Efforts in Other Jurisdictions

The identification of goals and objectives for the health system is not unique to Alberta. Other jurisdictions have already undertaken or are presently working on similar projects.

In 1987, two documents were released in Ontario. The report of the Panel on Health Goals for Ontario (Spassoff Report) outlined seven goals (with a number of subsidiary objectives) focussing on health rather than health care. Specific directions for the health care system were proposed in the Evans Task Force Report.

Quebec has also been working to identify goals and objectives for its health care system, along with specific targets for achievement. Evidence suggests that where these targets have been identified and strategies have been directed towards them, the targets have generally been attained.

A federal/provincial working group has met a number of times over the past few years to attempt to identify health status targets and information required to monitor them. While their work is not complete, there is general agreement on the need for such targets.

In the United States, the Department of Health and Human Services has produced a number of reports on the identification of health goals. Their approach has been more sophisticated than that used in Canada but has suffered from a failure to implement the identified goals.

Finally, at the First Ministers' Conference on the Economy, held in November of 1987, a number of provinces called for federal and provincial cooperation in developing health care goals and objectives.

11.4 Anticipated Difficulties in Goal Setting

The establishment of goals and objectives is not in itself a difficult intellectual exercise. There are, however, a number of important and powerful individuals, groups and agencies involved in providing health care and this fact can be a barrier to achieving common goals.

Even if a specific group or agency does have clearly expressed goals, there can be internal confusion as to their relative priority. Where the goals of one group come into contact with those of another, they may cancel one another. Finally, even where there is consensus on broad goals, there can be intense differences about the best strategies for achieving them.

Goals and objectives, however carefully devised, may conflict with the realities of political life. Goal statements constrain government's freedom to act. Politicians are unlikely to accept policy directives that severely limit their ability to respond to the wishes of the electorate. As well, while goals and objectives are set for the long term, politicians face the reality of the four-year term of office.

11.5 Strategies for Implementation of Mission, Goals and Objectives

The Advisory Committee proposes the following strategies for development and implementation of a mission, principles, goals and objectives for Alberta's health care system:

11.5.1 **Biannual Conferences on Goals and Objectives:** The Minister of Health should sponsor biannual conferences, jointly organized by the Universities of Alberta and Calgary, together with stakeholder groups, on health goals and objectives. The purpose of these conferences would be to develop a mission, goals, and objectives for Alberta's health system and to review progress in their achievement.

11.5.2 **Conference Organizing Committee:** The organizing committee appointed for each conference should be made up of representatives from Alberta Health and the universities to develop background material, organize the conference format, issue invitations to stakeholder groups, and make conference arrangements (see Recommendation 11.5.1).

11.5.3 **First Conference Agenda:** The first conference would address itself to the mission, goals, objectives, and principles for health care in Alberta proposed by the Premier's Commission on the Future of Health Care for Albertans and the Advisory Committee on the Utilization of Medical Services. The objective of the two- to three-day conference would be to achieve consensus on a mission and goals for Alberta's health care system and to develop a strategy for identifying specific objectives and health status targets. Future conferences would refine the mission, goals and objectives, review their relevancy, and monitor progress in achievement (see Recommendation 11.5.1).

11.5.4 **Provincial Plan for Health Care:** Based on the mission, goals and objectives for the health care, Alberta Health in consultation with the stakeholder groups should develop a provincial plan for health care (see Recommendation 11.5.1).

11.5.5 **Development of Planning Tools:** Alberta Health should develop the planning and management processes required to achieve the goals and objectives. As well, the department should review legislation, regulations and policy to ensure consistency with the overall goals of the health care system. Other stakeholders should be urged to adopt and implement the results of the conferences (see Recommendation 11.5.4).

11.5.6 **Area Health Planning Councils:** Area Health Planning Councils should be established for geographical areas throughout the province. Councils should include representatives of acute care, long term care, home care, public health, and practitioners. The councils should be funded by and accountable to their representative organizations. They would be responsible for setting health goals at a local level, consistent with those determined for the province as a whole (see Recommendation 14.2.3).

11.5.7 **Intergovernmental Cooperation:** Alberta should work with other provincial governments and the federal government to develop a consistent approach to health policy on a national and interprovincial level.

Suggested Goals and Objectives for Alberta's Health Care System

The following are goals and objectives for Alberta's health care system proposed by the Advisory Committee. They should be considered at the first conference on health goals and objectives for Alberta.

1.0 Provide quality health care to the citizens of Alberta in order to attain the greatest achievable health benefits.

1.1 Alberta is committed to attaining the following health status targets by the year 2000:

A. Decrease perinatal death rate to 6 deaths per 1000 live births.

B. Increase average birth weight to 4000 grams.

C. Decrease suicide rate to 10 per 100,000 population.

D. Increase life expectancy to 75 for males and 82 for females.

E. Decrease deaths due to motor vehicle accidents to 10 per 100,000 population.

F. Reduce inpatient hospitalization rate by 10%.

2.0 Encourage personal responsibility for health amongst Albertans including preventing illness, maximizing independence, and participating in decisions about personal care needs.

2.1 Alberta will encourage development of programs in the community and in health care institutions to prevent illness and disability.

2.2 In partnership with industry and labour, Alberta will implement measures necessary to ensure the highest possible level of safety in the workplace.

2.3 Alberta will develop programs that reinforce individual responsibility for health and support local initiatives in the development of community health education programs.

2.4 Alberta will continue to improve its health education program in the schools, emphasizing avoidance of unhealthy life styles and encouraging individual responsibility for health, self care, mutual aid, and appropriate use of the health care system.

3.0 Organize a network of health services that promotes equal and timely accessibility to services for all citizens requiring care.

3.1 Alberta will plan health and social services programs in a coordinated fashion according to demonstrated need and consistent with a comprehensive health and social services strategy.

3.2 Alberta will develop services on a regional basis to ensure all areas of the province have convenient access to a defined minimum level of services.

3.3 Alberta will develop an effective patient transportation system to avoid harmful effects caused by distance from appropriate care centres.

3.4 To the extent possible, a limited number of "points of entry" will be developed to permit easy access to comprehensive health and social services for patients with multiple needs.

4.0 Provide cost-effective health care services within the limit of available resources to meet the needs of defined groups of Albertans.

4.1 Alberta will fund the health care system to the level necessary to achieve its goals and objectives.

4.2 By the year 2000, Alberta will achieve appropriate institutional capacity for patients requiring long term care, mental health, rehabilitation and active treatment.

4.3 Alberta will emphasize ambulatory care, rehabilitation, long term care, and home care as alternatives to institutionalization in active treatment facilities.

4.4 Alberta's health care funding system will encourage providers to use services appropriately, so that users receive high-quality care in the most cost-effective setting.

4.5 Alberta will develop a comprehensive health manpower policy to meet present and future needs.

5.0 Alberta will develop a set of standards to measure quality of care, utilization, and cost-effectiveness.

5.1 Alberta will develop a comprehensive and integrated data base on health status and health services utilization.

5.2 Alberta will develop mechanisms to monitor use of health services by patients and will encourage appropriate use of health care services through public education.

5.3 Alberta will develop mechanisms to monitor the provision of health services by practitioners, hospitals, and other providers; will develop incentives for effective utilization; and will promote public accountability.

5.4 Alberta will evaluate the performance of its health care system at regular intervals, using data on health status, utilization and financing to compare actual delivery with defined goals.

12.0 The Institutional Funding System

BARRIER: The funding system now used to reimburse hospitals and other institutions for the cost of care contains features that may promote excessive and inappropriate use of those facilities. The funding system also lacks adequate incentives for efficiency.

Many observers of the Canadian health care system have noted that the global system of funding institutional health services, based on per diem rates and incremental adjustments, contains disincentives for efficiency and appropriate use. The Advisory Committee believes that Alberta's funding system for hospitals and other institutional care providers does indeed contain some of these negative features.

12.1 The Existing Institutional Funding System

The global funding system now used in Alberta provides unrestricted block grants to hospitals and other agencies to operate approved programs. Funds are allocated on the basis of the prospective costs required to run the institutions. They are calculated by taking historical information on costs and adding adjustments to recognize inflation, collective agreements and other changing requirements.

The system has some advantages. It is easy to administer and does not require a large bureaucracy or complex data systems. As the costs are determined on a prospective basis, it allows government to maintain a high degree of control over institutional costs.

On the other hand, this system also has a number of weaknesses. Funding is primarily provided on a per diem basis, so hospitals are implicitly rewarded financially for increasing a patient's length of stay. This is because the low-cost later days even out the higher costs of the earlier ones. Except for incremental adjustments to the historical base, there is little understanding of how global budgets are calculated. This leads to concern that the allocation process may not be fair. As evidence, hospitals usually cite the wide variations in cost between institutions with similar roles and volumes.

The present system is insensitive to case mix or severity. There are few incentives for early discharge to less costly alternatives, and no incentives to encourage a shift from inpatient to outpatient care. The focus on number of beds and occupancy rates leads to the impression that closing beds is contrary to institutional and public interests. The elimination of inter-hospital billing has made hospitals less accountable for work that is referred elsewhere.

Specific examples of how the institutional funding system inhibits cost-effectiveness include:

- Patients are admitted for minor surgical procedures such as cataract extraction when such care can be safely provided on an outpatient basis;
- Average length of stay is increased to maintain bed occupancy;

- Laboratory samples are sent to referral hospitals or other laboratories for the sole purpose of reducing the referring hospital's laboratory costs.
- Patients are kept in hospital when care can be provided on a home care or long term care basis;
- There is no incentive to turn under-used active treatment capacity into long term (auxiliary) care capacity;
- Hospitals are reluctant to transfer patients to centres that are better equipped to provide needed care because transportation costs must be absorbed by the referring hospital;
- The health care system has failed to direct its education and research agenda to broad system goals, to improve the cost-effective delivery of services.

No funding system will be perfect or satisfy the wishes of all stakeholders. Nonetheless, improvements can be made to the existing system. It is worth noting that Alberta has shown a greater willingness to experiment with the funding systems than has any other jurisdiction. At the present time, a committee consisting of representatives from Alberta Health, the Alberta Hospital Association, the Alberta Medical Association, the Alberta Association of Registered Nurses, and the Council of Teaching Hospitals of Alberta is examining new approaches to funding. The Advisory Committee hopes that its suggestions will be considered and, where appropriate, incorporated into any future funding proposals.

12.2 Attributes of an Effective Institutional Funding System

12.2.1 The funding system should be consistent with a provincial plan for health care. This assumes that the role of each institution and the scope of its services are clear. Without formal definitions of what the institution can and cannot do, arguments over program funding are inevitable.

12.2.2 The funding system should allow government to maintain cost control. Alberta Health must be able to remain within the allocations approved by Treasury Board.

12.2.3 The funding system should be easily understood, fair, equitable, and consistently applied. The funding system will only be supported if stakeholders feel confident that hospitals providing similar types and volumes of care are treated similarly and can satisfy themselves they have been treated fairly.

12.2.4 The funding system should separate funding for inpatient activities, outpatient activities, rehabilitation and long term care activities. The funding system should be able to provide specific incentives for desired changes consistent with overall government policy. It should recognize the inherent differences among these activities and provide incentives for the appropriate use of each. The funding system should establish target volumes, perhaps with a predetermined cap on certain activities, based on individual negotiations between the institution and the funding agencies.

12.2.5 The funding system should provide specific incentives for desired changes consistent with government policy. This would be analogous to the incentives in tax law. These institutional funding incentives should of course be consistent with practitioner and patient incentives.

12.2.6 The funding system should recognize case mix and severity. Treatment of different patients with different illnesses may result in remarkably variable resource consumption profiles.

12.2.7 The funding system should be fairly easy to maintain and not subject to rapid outdating, as is presently the situation with the Diagnosis Related Group system in the United States.

12.2.8 The funding system should be cost-effective to administer. Changes to the funding system would be pointless if funds that could be used for patient care are inappropriately consumed in the operation of the funding system itself.

12.2.9 The funding system should promote accountability for institutions, practitioners and patients. Once funding agreements are in place, there should be mechanisms to ensure compliance. There must also be accountability when workload is transferred between institutions.

12.2.10 The funding system should be stable and predictable. Cycles in the existing system do not allow for meaningful long-range financial, physical, and manpower planning.

12.2.11 The funding system should encourage the use of appropriate technology when such technology has demonstrated economic and clinical advantages. This assumes that technologies and their results will be continually assessed. When such assessments are positive, the funding system should encourage adoption of new technology in place of the less effective technology.

12.3 Recommendations for a revised Institutional Funding System

The following recommendations are not exhaustive, but they should promote improved economy and effectiveness in the provision of institutional care.

12.3.1 **Role Statements:** Each institution should have its role and scope of services explicitly defined. The role of each institution in a region should complement the roles of other health facilities. As well the role of the institutional sector should complement the other health care sectors. Institutions with similar roles and scope of services should be grouped so that similar funding standards can be applied. Funding for new initiatives should only be provided on a trial basis after a formal review. Funding may be made permanent after a formal evaluation of the initiative is carried out (see Recommendations 11.5.4, 11.5.5, 16.3.1 and 16.3.2).

12.3.2 **Standards for Fixed and Variable Costs:** For each type of institution, funding standards should be developed for fixed and variable costs. Fixed costs, covering infrastructure and overhead, would include such services as physical plant operations and administration. Variable cost standards would be set on a unit-of-care basis and include inpatient admissions, day surgery, other outpatient visits, and long term care patient days. Casemix and severity measures should be built into the calculation of variable rates. Cost standards should include some flexibility for unique institutional features such as building age, provided that exceptions are explicitly identified in funding rate decisions (see Recommendations 12.3.8 and 14.2.10).

12.3.3 **Volume Contracts:** Each institution should annually contract with Alberta Health the minimum and maximum volumes for inpatient stays, day surgery visits, outpatient visits, long term care patient days, etc. Semi-monthly payments should be prospectively calculated at the middle of the volume range for variable items. A year-end reconciliation process should result in additional funds to the institution if the mid-range volume target for these variable items is exceeded. Hospitals that exceed maximum volumes should not be guaranteed additional funding. If such is provided, the variable rate of payment should be reduced. If the hospital's volumes were less than the middle of the volume range, funds would be returned to Alberta Health. If an institution's volumes fall below the minimum or exceed the maximum targets, a role review should be undertaken in the base review fiscal year (see Recommendation 12.3.2).

12.3.4 **Disclosure of Calculations:** The calculation of fixed and variable costs along with the notation of exceptions should be explicitly identified in all rate decisions. This information should be provided to institutional boards and administrators so they can ascertain how funding was provided. All rate decisions should be public so that institutions can determine if they were treated in a similar manner to like institutions. The funding system should be supported by a budget manual describing the budgeting process, hospital groupings and standards for fixed and variable costs, etc. (see Recommendation 12.3.2).

12.3.5 **Funding for Unapproved Programs:** All new programs or new services must be formally approved in writing before funding is granted. Verbal or informal approvals should be strictly prohibited on the part of both institutions and Alberta Health. Programs or services initiated without a formal written approval should not be funded for capital or operating costs and institutions which initiate such programs should be subject to penalties. However, to preserve a measure of local autonomy, institutions should be able to operate programs and services for which Alberta Health does not grant funding, provided they do not result in spin-off costs (see Recommendation 16.3.4).

12.3.6 **Treatment of Surpluses and Deficits:** Any deficits, should remain the responsibility of the institution's board and should not be funded by the province. On the other hand, all surpluses should also remain with the institution's board, provided that volume targets have been met and surpluses were achieved through operating efficiencies. This will ensure that efficient institutions are not financially penalized for generating a surplus by having their budget reduced in subsequent years unless there has been a rate change.

12.3.7 **Incentives in Funding Rates:** Programs such as day surgery should be separately funded at rates designed to encourage a shift in care from an inpatient to an outpatient setting. If the basis for inpatient funding is shifted from patient-days to the number of inpatient stays, institutions will have an incentive to reduce average length of stay and place patients in other settings for after-care. The funding rules should specifically provide that institutions may purchase home care services from home care authorities as part of early discharge planning programs. Hospitals should be permitted to develop specialized home care programs in cooperation with local authorities, using existing funds for unique home services such as parenteral therapy. The proposed Monitoring Committee should monitor short-stay admissions to ensure that patients who could be treated on an outpatient or day surgery basis are not admitted to hospital to increase volumes rather than legitimate patient-care reasons (see Recommendation 2.4.1). Hospitals engaging in such practices should be subject to predetermined penalties. Alternatives to inpatient care should be approved and funded in a way that encourages transfer of funds from inpatient to outpatient programs so that such programs do not become "add-ons" (see Recommendations 5.4.4 and 16.3.4).

12.3.8 **Severity and Casemix Funding:** Specific variable funding rates should be developed for patients admitted to approved open heart surgery, end stage renal disease, total parenteral nutrition, pacemaker, chemotherapy, perinatal/ neonatal, burn treatment, transplant and intracranial neurosurgery programs. This would partially compensate for severity and casemix for these specialized services. The variable costs for these services should be standardized. As there are a limited number of such approved programs, the negotiation of these variable costs ought to be straight forward (see Recommendation 14.2.10).

12.3.9 **Inter-hospital Billing:** Inter-hospital billing should be re-instated so that institutions that purchase services on behalf of patients are required to pay the cost of those services. Laboratory services, for example, could be purchased either from regional hospitals or from private laboratories. Rates should be determined through negotiation between the purchasing and the providing agency to promote an element of competition. This would allow purchasers to seek the best rate and service possible.

12.3.10 **Patient Transportation:** In order to promote prompt transfer where appropriate, patient transportation to and from other centres should be fully funded as a separate budget item and subject to year end reconciliation. A system must be designed, however, to ensure that such transfers are appropriate. Funding ought not to be an impediment to transfer of patients between institutions where more sophisticated forms of care are required or, conversely, when patients can be returned to their own community for care at less cost (see Recommendation 8.4.6).

12.3.11 **Technology Acquisition and Assessment Fund:** A fund should be established to allow Alberta institutions to acquire contemporary technology in a timely fashion and provide a mechanism for assessing the efficacy and economy of that technology. Where new technology becomes available, Alberta Health should be in a position to provide capital and operating funding on a limited-term, pilot-project basis, to a limited number of sites. Each technology assessment pilot should be contracted to a receiving institution, which in return for the operating and capital funding, agrees to conduct a formal technology assessment. This assessment would provide information on the efficacy and safety of the technology, its potential for use in other centres, and protocols for use (see Recommendation 19.5.5).

12.3.12 **Base Budget Reviews:** Every three to five years, Alberta Health and the institutions should formally review the funding standards and the fixed and variable rates. Such base reviews should consider technological change, service population changes and other factors for the hospital system as a whole and then for individual hospitals. They would determine whether or not significant events have occurred to institutional rates; standards would be adjusted as necessary. As part of the base review process, forecast (but not guaranteed) percentage adjustments should be made based on economic trends in the province to allow institutions to plan their activities in subsequent years.

12.3.13 **Other Health Care Sectors:** The funding systems for the long term care, home care, and community care sectors, as well as the practitioner funding system should also be reviewed to ensure that they complement each other (see Chapter 13). Negative features in the funding mechanisms for other components of the health care system are likely and these should also be addressed and corrected.

13.0 The Practitioner Payment System

BARRIER: The current system of payment for practitioners may encourage unnecessary use of health services.

The majority of medical services provided by physicians and other practitioners in Alberta is funded on the basis of fee-for-service. While other arrangements such as sessional payments do exist in specific instances, these represent a small proportion. By its very nature a "piece work" or fee-for-service system, while it encourages productivity, it promotes the use of services some of which may be unnecessary. The goal of the practitioner payment system should be the provision of equitable funding to practitioners based on their input of time and skill.

13.1 The Present System

Alberta's fee-for-service payment system is based on the Schedule of Medical Benefits which contains some 4,215 items. The schedule emphasizes medical procedures, with little recognition for the time required for activities such as counselling and education. There is no recognition within the Schedule of Medical Benefits for the quality of service, the experience of care givers, or the demands of the patient. The services defined do not have a relative value other than the fee for each service. The Schedule of Medical Benefits is developed by the Alberta Health Care Insurance Plan and the Alberta Medical Association and incorporates weighting factors which attempt to ensure equitable distribution of income to various groups. Increases to the Schedule are negotiated between government and practitioners.

There are a number of examples where the current practitioner payment system does not result in fair compensation for the input of time and skill. For example, general practitioners functioning in a walk-in centre setting may see large numbers of patients with minor, self-limiting illnesses, claimed as A2 visits at $21.60 each. On the other hand, physicians dealing with Class 4-HIV positive patients with very complex problems may see a few patients in the same time period and receive between $7.30 and $17.00 per patient, depending on how long the patient has been in hospital. Cataract surgery with intraocular lens implantation takes approximately 25 minutes (plus preoperative assessment and follow-up). Practitioners are paid $563.00 for this service, whereas an internal medicine consultation for a complex patient taking up to one hour is paid at the R1 rate of $94.00.

It is thought that the current practitioner payment system encourages a marketing approach to medicine with extended hours and improved business practices. It also appears to encourage a degree of manipulation of the Schedule of Medical Benefits and caters to services rather than the provision of health care. The Schedule encourages the use of expensive outpatient, emergency and hospital facilities for procedures and visits which could well be performed more inexpensively in private facilities.

The Schedule of Medical Benefits is slow in adapting to new technology. Changes in surgical techniques have reduced operative time and made surgery considerably easier than was the case in the past, but the fee remains the same. New procedures, on the other hand, are frequently under-valued when they are introduced. Finally, the Schedule does not distinguish between patient-generated and physician-generated services.

13.2 Attributes of an Effective Practitioner Payment System

13.2.1 The payment system should result in fair and equitable compensation to practitioners, based on their input of time, skill, complexity and overhead. The recent relative-value study for physician services conducted at Harvard University demonstrates that it may be possible to determine the relative value of medical services.

13.2.2 The payment system should be sensitive to technological change. Where advances in medicine or technology reduce the investment of time and skill required for a medical service, there should be a corresponding reduction in the fee for that service. Also, if different approaches achieve the same therapeutic end, the fee should be the same.

13.2.3 The payment system should encourage the provision of care in the least costly setting. If procedures can be performed in an outpatient setting rather than an inpatient setting or if they can be performed in the office rather than the hospital, incentive compensation should be used to encourage the shift.

13.2.4 Compensation should reflect the severity of illness. A cholecystectomy for a healthy 35-year old patient should not be compensated at the same rate as would be the same procedure on an elderly patient with serious complicating illnesses.

13.2.5 The Schedule of Medical Benefits should be purged, at regular intervals, of fees for services of questionable value, such as lipoprotein electrophoresis. (See Chapter 3, "Diagnostic Services.")

13.2.6 The payment system and associated rules should encourage the rational investigation of patients rather than a shotgun approach. Thus, a full series of thyroid function studies should not be paid for unless it has been preceded by the appropriate screening test. (See Chapter 3, "Diagnostic Services".)

13.2.7 Methods other than fee-for-service should be investigated and implemented when such payment systems would result in more equitable compensation without encouraging inappropriate or excessive use of services.

13.2.8 Incentives in the practitioner payment system should complement incentives in institutional funding, in order to encourage changes in the health care system consistent with public policy initiatives and the goals and objectives for the health care system.

13.3 Recommendations for Redevelopment of the Practitioner Payment System

The following approaches and strategies are recommended by the Advisory Committee as a means of developing a practitioner payment system for Alberta with the attributes identified above:

13.3.1. **Task Force On Practitioner Payment:** A task force or committee should be established to investigate alternative payment approaches, including fee-for-service, sessional fees, salaries and capitation. The task force would be made up of representatives from the College of Physicians and Surgeons (Alberta), the Alberta Medical Association, the Alberta Hospital Association, and Alberta Health. The task force would focus on systems rather than individual items or fees, and would make recommendations to the Minister of Health.

13.3.2 **Analysis of Relative Value:** Relative value systems should be seriously studied as an approach to fee setting.

13.3.3 **Review of Schedule of Medical Benefits:** The Alberta Health Care Insurance Plan and the Alberta Medical Association should undertake a complete review of the present Schedule of Medical Benefits: recategorizing benefits; examining individual items and eliminating those with little patient benefit; and adjusting fees where technological change has resulted in current fees being either too high or too low (see Recommendation 2.4.6).

13.3.4 **Incentives for Least-Cost Care:** The review of the Schedule of Medical Benefits should include consideration of a system of differential fees for provision of services in different settings. Such a system would contain incentives to shift care to the least costly setting (see Recommendation 5.4.4).

13.3.5 **Consultation Benefits:** The review of the Schedule of Medical Benefits should include consideration of a consultation benefit to physicians when appropriate referrals for services are made by non-physician health-care practitioners.

14.0 Organization of the Health Care System

Barrier: Responsibility for health care services is divided among a number of different government departments. This results in a lack of coordination or comprehensive planning for health services.

Health care and related services are currently delivered through a number of government departments as well as many local organizations, both publicly and privately managed. There is evidence of a lack of coordination and communication amongst these organizations. This has resulted in gaps and overlaps in programs and services. At the same time, funding is unavailable to encourage care in more cost-effective settings or for health promotion and prevention activities.

14.1 The Present Organization of the Health Care System

Health care and related services are frequently considered the responsibility of Alberta Health. Until recently, health services were divided between the departments of Hospitals and Medical Care and Community and Occupational Health. The Advisory Committee feels that this division blocked the interaction between acute care, long term care and home care. Therefore the committee applauds the amalgamation of the two departments into Alberta Health.

It is vital to recognize that health has many determinants. In addition to health services and health care, factors such as housing, education, income support and safe roads all contribute to health. Health is therefore affected by the activities of departments such as Family and Social Services, Municipal Affairs, Education, Advanced Education, Career Development and Employment, Environment, and Transportation. Health is a product of the combined influences of prevention/promotion, diagnostic and treatment services, lifestyle, economics, education, environmental, and social factors.

Responsibility for the delivery of health services is divided among more than one-hundred active treatment hospital boards, an even greater number of long term care facility boards, 27 health unit boards, and a variety of other agencies including Family and Community Support Services, school boards, and the like. Boards and administrations of multiple organizations and departments often do not work or plan jointly to address cost-effective and efficient health care. In some areas, artificial divisions mean that the entire continuum of care is not viewed in a fashion that permits appropriate planning and allocation of resources.

Examples of how the organization of the health care system can detract from cost-effectiveness are plentiful. The historical development of Canada's health care system beginning with the implementation of the *Hospital Insurance and Diagnostic Services Act* has resulted in an over-dependence on acute care hospitals with little attention paid, until recently, to less costly alternatives. Even today, many programs in our health care system fall outside of the jurisdiction

of the *Canada Health Act* and its portability provisions. Each province funds their health care services according to their unique policy considerations, consequently there are problems of reciprocity respecting inter-provincial billings.

Within Alberta, the restrictive budgeting arrangements for home care programs have resulted in patients occupying considerably more expensive hospital facilities. The cost of maintaining separate bureaucracies and offices for active treatment, long term care, home care and public health activities must represent a substantial cost to the taxpayer. The absence of a single point of entry for patients with social, mental and physical problems creates difficulties in developing comprehensive and effective treatment plans.

The design of Alberta's health care system, with its horizontal structures, creates the potential for gaps in accountability, lack of coordination and difficulty in control. This is exacerbated by inadequately articulated goals, as described earlier.

14.2 Recommended Improvements in the Organization of Health Services Programs for cost Effectiveness

The following recommendations deal with measures to improve intersectoral coordination and collaboration with respect to health and health care services. Planning, program development and avoidance of unnecessary duplication could result in substantial savings and improved care.

14.2.1 **Inter-Departmental Co-ordination:** The Alberta government should develop a mechanism to ensure interdepartmental co-ordination on issues that affect the health of Albertans. This could take the form of an interdepartmental policy analysis group responsible for examining the health impacts of actions from a variety of departments such as Family and Social Services, Municipal Affairs, Transportation, Environment, Education and Transportation. Such a group could provide advice on the health impact of public policy initiatives and help avoid some of the unforeseen and unfortunate health consequences of legislative, regulatory and budgetary actions. This group's success would depend on the existence of government-wide, clearly articulated health goals and objectives.

14.2.2 **Regional/Local Co-ordination:** Co-ordination should be extended beyond the provincial government to regional and local levels. Methods of linking or unifying acute care, long term care, public health, social services, and other programs should be tested. At a minimum, local and regional authorities need to find ways to complement proposed linkages at the provincial level (see Recommendation 16.3.5).

14.2.3 **Area Health Planning Councils:** Area Health Planning Councils should coordinate planning and policy development, program implementation, and program review in concert with regionally established health goals and objectives. (See Chapter 11, "Goals and Objectives," 11.1.5.) Councils may wish to consider initiatives such as Ontario's proposal for regional health program coordinators who would help develop priorities and plan for health care needs that cut across community, institutional, and personal delivery systems. These regional goals would be consistent with overall provincial health goals and objectives (see Recommendation 11.5.6).

14.2.4 **Community Care as Entry Point:** Home care programs should become the entry point to the long term care system. This would create a community-based bias instead of an institutional bias for long term care. The single-point-of-entry system should be designed to encourage care at the lowest possible level and should be complemented by an educational strategy designed to increase public awareness of community care alternatives (see Recommendation 16.3.5).

14.2.5 **Home-Based Care:** Alberta Health should investigate the development of systems to provide medical supplies, drugs, and nutrients in the home, rather than in institutions, as a means of supporting and encouraging a shift from institutional to community-based care. Programs such as New Brunswick's Extramural Hospital, as well as Extended Health Benefits and Blue Cross coverage for such services provided on a community basis should be considered, along with other models that may be identified.

14.2.6 **Respite Care:** In addition to community-based forms of care, alternatives such as day hospitals and respite care should be examined urgently as a means of providing support to individuals who need care but now live in the community. These measures, along with emergency response teams as proposed in the Mirosh Report,[13] would go a long way to avoiding unnecessary "social" admissions to acute care facilities with their attendant expense and risk of functional deterioration.

14.2.7 **Incentives for Early Discharge:** Institutional funding should include incentives to encourage early discharge of patients to less costly settings where care of equal quality can be provided (see Recommendation 5.4.4).

14.2.8 **Individual Support:** To the extent possible, all programs should consider the unique needs of each patient and their families. For example, income support so that a spouse can hire care givers for brief periods might provide adequate care and supervision for dependent patients at less cost than existing home care mechanisms (see Recommendation 12.2.13).

14.2.9 **Funding System:** Incentives must be developed in funding systems for all health care services providers to plan jointly and organize services in a way that reduces unnecessary duplication and results in comprehensive services (see Recommendation 12.2.13).

14.2.10 **Multi-Problem Patients:** Comprehensive care approaches should be examined for patients with multiple medical and social problems, particularly in rural areas. The coordination of medical, mental health and social services often needed by multi-problem patients is frequently so burdensome that it does not get done. At the present time, the practitioner payment system and the lack of a single-point-of-entry and/or social work resources do not permit the development of comprehensive strategies to address social, emotional, housing, and medical needs of patients (see Recommendation 12.3.8).

14.2.11 **Funding Community-Based Care:** New initiatives in community-based care should be developed so that they are not "add-ons." Many of the measures proposed will only be of value if they represent alternatives to acute care hospitals, so that funds are transferred from this sector (see Recommendation 12.2.13).

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[13] *A New Vision For Long Term Care: Meeting The Need*, Alberta Legislature, February 1988.

15.0 Information Systems

BARRIER: The absence of easily accessible, comprehensive data on health status and utilization makes monitoring and planning difficult.

A reliable data base from which accurate, complete, and timely information can be derived is necessary for effective planning and monitoring of the health care system. Patients gain access to health services at a variety of different levels. However, our horizontally organized health care system maintains separate data bases which are not linked. There is also a shortage of skilled personnel to develop data collection systems, interpret data and provide analyses for comprehensive planning and policy purposes.

15.1 Alberta's Current Health Care Information Systems

There are a number of segregated data bases within Alberta's health care system. The most important data base, the Alberta Health Care Insurance Plan's claims file, contains information on all patients using a health care service for which a practitioner has made a claim. Unfortunately, this information system was developed as a system for paying practitioners and is therefore a cumbersome system from which to extract data for the purposes of analyzing usage and planning.

Hospital encounter information is recorded on a variety of data bases, including Alberta Health's "IRIS" system — which, however, provides only statistical and financial data. The data contained on a patient-specific basis is obtained by Alberta Health through third-party abstracting services such as the Hospital Medical Record Institute and the Commission on Professional and Hospital Activities. There is no linkage between the AHCIP data base and the various hospital data bases.

There are also data bases related to specific health care programs. For example, various health units collect and report a variety of statistical, morbidity, and mortality data. Health and sickness surveys are occasionally undertaken and provide another data base. Organizations such as the Alberta Alcoholism and Drug Abuse Commission, Alberta Mental Health Services, and other direct health service providers maintain data bases with respect to their activities. Again, it must be emphasized that these data bases are not linked. It is therefore impossible to track how individual patients or practitioners are using the health care system.

For example, while the private pathology and radiology systems count the use of laboratory services provided for individual patients by practitioner, it is not possible to determine the same usage of pathology and radiology services provided within hospitals or by the provincial laboratories. The different sectors do not even use the same system for counting services (see Chapter 3, "Diagnostic Services"). There is anecdotal evidence to suggest that when one element of the laboratory system has been faced with budgetary restriction, such as

services obtained through private laboratories, there may be a shift to obtaining the same services at the hospitals where individual use is not detectable. It is therefore impossible to monitor and evaluate the use of the entire health care system.

The lack of clear goals and objectives, institutional and practitioner financing systems, and territoriality contribute to the fragmentation of data bases. The recent formation of Alberta Health as a single department should provide the opportunity to develop more unified data bases. The previous separation may have contributed to a failure to use health status data collected by one department in planning health care services funded by another.

15.2 The Ideal Data Collection System

The ideal data collection system for health services in Alberta would be patient oriented. It would collect data pertaining to all interactions with all components of the health care system by individual patients. Such linked data would allow analysis of whether the goals and objectives of the health care system are being met. Such a system would permit detection and correction of deficiencies and abuses, including inappropriate utilization. It would improve our understanding of the epidemiology of disease and of the health status of specific subgroups or regions. It would allow planners to monitor shifts in usage among the various health care sectors and identify areas of service duplication.

It is recognized that if these initiatives are to be achieved, Alberta Health will require significant enhancement in its current level of systems support including computer power and expertise. While this will be costly, the benefits which will accrue from better information for planning and control will significantly outweigh these costs.

15.3 Recommended Strategies for Improvement in Alberta's Health Care Information Systems

The Advisory Committee believes the following recommendations would contribute to the improved information systems necessary to provide comprehensive data for planning and monitoring activities. The Reader is also referred to the Observations, Conclusions and Recommendations in Chapter 2, "Information Systems/Data Analysis," in particular Recommendation 2.4.9 regarding the need to fund a revised information system.

15.3.1 **Strategic Plan:** Alberta Health, in consultation with health care providers and agencies, should develop a strategic plan and principles for development of health information systems and data bases in Alberta. Such a plan should identify principles to be incorporated in any health-related information systems as they are developed or redeveloped. The plan should be reviewed at regular intervals to determine continuing relevancy, technological feasibility, and cost (see Recommendation 11.5.4).

15.3.2 **Patient Identifiers:** Alberta Health should investigate and implement a system of unique patient identifiers in order that the provision of any service in any sector of the health care system can be related to an individual patient (see Recommendation 2.4.3).

15.3.3 **Practitioner Identifiers:** Practitioner identification codes and location codes should be collected in association with patient identifiers for services regardless of the sector of the health care system in which they occur (see Recommendation 2.4.3).

15.3.4 **Flexibility of Analysis:** Information systems should be designed to permit information to be analyzed on a patient-specific, practitioner-specific or agency/institution-specific basis (see Recommendation 2.4.3).

15.3.5 **Confidentiality:** Safeguards to protect the confidentiality of patient information must be developed in association with health information systems. However, such safeguards should not be so restrictive that they prevent the use of data bases for legitimate purposes such as health research, utilization monitoring, and policy or program planning purposes.

15.3.6 **Detecting Service Duplication:** Alberta Health should investigate the feasibility of an information system that permits physicians and other practitioners to determine whether tests or services have been provided in the recent past and the location of those results. This would help avoid unnecessary duplication and permit practitioners to detect phenomena such as doctor shopping, drug abuse, child abuse, Munchausen's syndrome, etc. This could be accomplished either through an information system network or a revised AHCIP card using "smart card" technology.

15.3.7 **Epidemiological Data Base:** Data collected by practitioners, hospitals and the other health care providers should include enough diagnostic information to permit the development of comprehensive data bases for epidemiological purposes. In particular reporting of communicable diseases should be emphasized, including existing notifiable diseases. Linkage of such information together with Vital Statistics, Medical Examiner, and disease registry data bases should be encouraged where possible to permit a comprehensive view of the health status of Albertans.

15.3.8 **Health Status Surveys:** Regular health status surveys should be undertaken.

15.3.9 **Health Status Targets:** The various data bases and information collected should be used as a basis for developing health status targets and determining the health system's success in achieving such targets (see Recommendation 11.5.4).

16.0 Professional and Institutional Territoriality

BARRIER: Territoriality, fueled by the aspirations of institutions and practitioners, has led to unnecessary duplication and excess utilization.

Competition in our society is generally regarded as healthy, provided such competition is fair and results in better value or quality. In health care, however, excessive competition too often leads to unnecessary duplication of programs and services and to discontinuity in the provision of services. This in turn negatively affects patient care. Institutional pride, the desire to be technologically current and consumer demand have led boards of institutions to develop programs or purchase equipment already conveniently available within the region. Increasing specialization and subspecialization in health disciplines, largely in response to the knowledge explosion and particularly at the technical level, have led to numerous "turf battles" without regard for the needs of patients or cost effectiveness. Various occupational groups within the health care system continue to compete for power, influence, and resources. The untoward effects of inter-institutional and inter-professional competition and territoriality are likely to increase the difficulty of managing the health care system and decrease cost effectiveness.

16.1 Institutional Competition and its Effects

Each of Alberta's many health-care institutions and agencies has a separate board and a mandate to provide high quality care. In many cases, their mission statements do not incorporate the concept of cost-effectiveness. Their boards are frequently composed of lay people from the community who accept professional advice on program development from staff. Quite naturally, the staff maintain a strong desire to provide high-quality and comprehensive services. Physicians in such settings may also be encouraged to expand programs or obtain the latest technology to enhance their income potential through fee-for-service billings.

All of these dynamics combine to encourage institutions to continually seek role expansion and the initiation of new programs. Our existing health care system does little to define explicit roles for a given institution. Moreover, there are no disincentives for role expansion. The incremental approach to global budgeting for hospitals generally means that hospitals can only expand their base through new programs. As there are no penalties for establishing programs without formal approval and because from a political point of view it is virtually impossible to discontinue programs hospitals are implicitly encouraged to expand their services.

At the same time, inter-institutional and regional planning, particularly at the program level, has been relatively minimal in Alberta. The failure of hospitals to join in regional cooperation and rationalization of services has been well documented. Where regional planning authorities such as area hospital planning councils currently exist, they function in an advisory capacity to the

Minister of Health with no real power or authority. In a number of circumstances, the advice of such planning councils has been ignored by government because the political consequences associated with implementation of recommended solutions is seen as being of greater importance than the benefits that will accrue from rationalization.

Lack of clear roles is not limited to institutions alone. Non-institutional care providers such as home care have occasionally engaged in inter-agency competition. Some home care providers wish to assume exclusive jurisdiction over this form of care. Some hospitals, on the other hand, take the view that home care providers are incapable of providing specialized services such as home dialysis or post-operative home care. Occasionally, hospitals will duplicate home care programs already in existence because of their view that local home care providers cannot meet the needs of discharged patients.

16.2 Inter-Professional Competition

Competition is not only inter-institutional. The emergence of new health disciplines and better training of existing ones has led to overlap and discord.

Professional services overlap in a wide variety of health disciplines including medicine, nursing, physiotherapy, respiratory therapy, social work and psychology. The boundaries of responsibility and authority are often blurred. Most frequently, arguments arise over which professional group is competent to perform specific procedures or who may give professional direction.

Under the laws of Alberta, most diagnostic and treatment services can only be provided by a given discipline upon the order of a physician. This practice has generally been accepted as appropriate. However, within institutions, it creates the situation where certain disciplines wish to communicate only with physicians without regard for how other disciplines perceive patient need. Since physicians are not reimbursed for the time and energy devoted to serving as team leaders or to organizing a multidisciplinary approach to care, the result is often a lack of continuity in care and services.

Conflict also results between independently practicing professionals who provide similar kinds of services to patients. Conflict continues to exist between ophthalmologists and optometrists over primary vision care, particularly in regions where there is a surplus of both kinds of manpower. Plastic surgeons and dentists continue to debate who should be responsible for facial and maxillary surgery because of differing views on techniques and the importance of dental occlusion. Minimal cooperation often exists between chiropractic and medical practitioners occasionally resulting in duplication of services such as radiology. In fact, this was recently the subject of a Ministerial directive.

16.3 Recommendations to Promote Inter-Institutional and Inter-Professional Cooperation

The following recommendations are proposed by the Advisory Committee as approaches and strategies to improving the cooperation between institutions and occupational groups within the health care system.

16.3.1 **Provincial Plan for Health Care:** The Provincial Plan which is linked to the mission, goals and objectives for the health care system should outline the roles and responsibilities of all service providers in the province and propose approaches to linkage and networking of such programs and services (see Recommendation 11.5.4)

16.3.2 **Role Definitions for Institutions:** Within the context of the provincial plan, the role of all institutions should be explicitly defined in terms of programs and services. Such role definitions may be provided by Alberta Health or by the proposed Area Health Planning Councils (see Recommendations 11.5.4, 12.3.1, and 16.3.1).

16.3.3 **Role Stability:** Once defined, roles for institutional providers should not be altered except with formal approval from Alberta Health. Institutions should be penalized for initiating new programs without prior departmental approval. Such an approval process would involve a uniform approach to determining need. Consideration would include consistency with the institution's predetermined role; the initiative's fit with existing services in a region and with government priorities; and cost-effectiveness of the setting (see Recommendation 16.3.1 and 16.3.2).

16.3.4 **Financial Approval for Initiatives:** New program initiatives should be approved for an initial term only. Permanent funding should only be approved after the results of a comprehensive evaluation have been completed and considered (see Recommendation 12.3.5).

16.3.5 **Improving Regional/Local Co-Ordination:** Mechanisms should be developed to improve the effectiveness of regional or local planning. Ideally, local planning authorities would be provided with resources, including staff and access to health services data bases, in order to make informed decisions on program priorities. To ensure accountability, such planning authorities should be funded by health organizations in their region rather than directly by government (see Recommendation 14.2.2).

16.3.6 **Inter-Professional Co-Ordination:** Multidisciplinary approaches to patient care and teamwork should be encouraged. The Alberta Hospital Association, the Alberta Medical Association, the Alberta Association of Registered Nurses and Alberta Health should be encouraged to work with other health disciplines so that the skills and resources of various practitioners are used to best advantage. The disciplines should also work on improving inter-disciplinary communication and co-ordination of services.

16.3.7 **Alternatives to Physician-Provided Services:** Since many patient needs could be better met at lower cost through services provided by other disciplines, Alberta Health should explore alternatives to physician-provided care. The department should consider covering the cost of services provided by nurse practitioners, social workers, nutritionists, and other health professionals working in private practice settings in association with physicians.

16.3.8 **Physician Compensation:** The Alberta Health Care Insurance Plan and the Alberta Medical Association should examine the feasibility of compensating physicians for time spent in activities such as team co-ordination and patient care team conferences.

17.0 The Regulatory System

BARRIER: Over-regulation in some instances creates utilization without benefit and in others, under-regulation has the same effect.

Those who draft legislation are not always able to foresee all consequences resulting from the promulgation of laws, regulations or policies. Occasionally, laws or regulations will unintentionally create the conditions for unnecessary utilization. While Albertans generally have a preference for less rather than more regulation, there must be a balance, particularly in activities that involve the expenditure of public funds. Laws and regulations that are no longer relevant or lead to inappropriate utilization should be discarded.

17.1 Over-Regulation

The term "over-regulation" refers to the development of law, regulations, or policies which become in and of themselves dysfunctional. The *Canada Health Act*, for example, limits the ability of any province to control the provision of insured health services to registrants in provincial health care plans. While the intent of the accessibility provisions of the *Canada Health Act* is to ensure equal and timely access to anyone who needs health services, they also make it difficult for provincial governments to apply consumer disincentives for inappropriate use of the health care system.

Alberta legislation has a number of provisions created at one time for a proper public policy purpose which have not been reexamined and which can result in the provision of unnecessary services. For example, regulations requiring certain admission testing routines ignore the growing trend towards ambulatory care. Requirements for consultation in a variety of medical services is of questionable benefit and incurs expense only to meet a legal requirement. The current policy of the Alberta Health Care Insurance Plan states that patients referred to specialists by non-physician practitioners such as optometrists and chiropractors can only be billed as "non-referred visits."

With respect to community care, provinces have erected artificial barriers because such services traditionally have not been cost-shareable between the federal government and the provinces. Prior to the Established Program Financing arrangements, only institutionally based and physician services were cost shareable and subject to portability provisions. Home care services have a waiting period for new residents in Alberta. The results is that such services for new residents will be delivered in the hospital even though such can be done safely and more cost effectively at home. Antibiotics and nutritional support provided to patients in hospital become the financial responsibility of the hospital rather than the patient. On discharge, however, the patient becomes responsible for the cost of these services, which creates a very substantial disincentive for patients to accept home care.

While not a direct result of regulation, the current system of malpractice litigation is thought to contribute at least in a minor way to utilization. Many physicians will admit that they order investigations which are not clinically indicated simply to protect themselves against a lawsuit. The ordering of the test will only provide a defence to the medical practitioner if the test was one which a reasonably competent practitioner would order in the circumstances. Assuming that litigation will only arise in cases where the patient has suffered a misadventure, the use of the diagnostic test as a defence mechanism will only come into play when the ordering of the test or its interpretation have, by definition, not prevented the misadventure. If the ordering of the test did not prevent the incident complained of, then its ordering is not a defence against negligence. Physicians who order tests for other than medical reasons do not protect themselves because such tests have no impact on litigation.

17.2 Under-Regulation

While over-regulation creates certain barriers to cost-effectiveness, the same can be said of under-regulation. The Advisory Committee has commented elsewhere on several areas where the lack of definitions or unclear descriptions of services allow for manipulation of the Schedule of Medical Benefits to the advantage of the practitioner. The virtual lack of control on the establishment of private pathology, radiology and other diagnostic facilities (See Chapter 3, "Diagnostic Services") has led to a proliferation of such outlets which may create pressure, albeit subtle, on practitioners to increase their use of such diagnostic facilities. The trend for some larger laboratories to establish specimen collection facilities in smaller communities where laboratory diagnostic services were previously provided by the hospital has resulted in under-utilization of hospital laboratory facilities funded by Alberta Health, while increasing billings to AHCIP for private laboratory services.

As noted elsewhere in our report, the lack of clear role definitions for hospitals and implicit incentives for establishing unapproved programs create opportunities for hospitals to expand their role. New services are instituted in the expectation Alberta Health will eventually be required to fund them.

Medical staff by-laws are another form of regulation in hospitals. Their main purpose is to set out the organization of the medical staff and outline expected professional conduct in a given institution. Virtually all by-laws acknowledge the need for quality control but few require medical staff to identify and eliminate over-use of hospital or professional services. There is no effective control of physicians who generate high volumes of service but provide inadequate services or spend too little time on patient care. Likewise, there is no control over unnecessary patient-generated utilization.

17.3 Strategies to Improve Health Care Regulation

The Advisory Committee offers the following recommendations, implementation of which will ensure that regulation of the health care system is effective and contributes to cost effectiveness.

17.3.1 **Review of Existing Legislation:** Alberta Health, after consultation with stakeholder groups, should review all legislation including acts and regulations of other departments. The intent would be to eliminate any regulations no longer relevant and amend those that lead to utilization without benefit. Such action should be based on current knowledge and research regarding effectiveness of medical services.

17.3.2 **Medical Staff By-Law Review:** Alberta Health, the Alberta Medical Association, the College of Physicians and Surgeons (Alberta) and the Alberta Hospital Association should review "model medical staff by-laws." By-laws should include mechanisms and systems to review use of hospital services and exercise control where necessary.

17.3.3 **Review of Medical Services:** The Alberta Hospital Association, the College of Physicians and Surgeons (Alberta), and the Alberta Medical Association should develop model approaches to review the use of medical services under revised medical staff by-laws.

17.3.4 **Incentives for Non-Institutional Care:** Any provincial regulations which detract from the placement of patients in the most cost-effective setting for clinical care should be eliminated. Funding should be provided for in-home use of nutrients, drugs, and other medical supplies as a means of supporting alternatives to institutional care (see Recommendations 5.4.4 and 18.4.5).

17.3.5 **Maintenance of Standards of Care:** Increased assistance should be provided to the College of Physicians and Surgeons (Alberta) to investigate and discipline physicians who do not meet the standard of care reflected in the fees provided in the Schedule of Medical Benefits.

17.3.6 **Malpractice Education:** In order to avoid the costs of diagnostic tests done solely as a defense against litigation, Alberta Health, the Alberta Medical Association, and the Legal Education Society of Alberta should develop an educational program for physicians on the nature of medical malpractice. Litigation may be avoided by providing a high standard of care (see Recommendations 9.4.1 and 9.4.2).

17.3.7 **Regulation of Private Laboratories:** Alberta Health should examine the need to regulate private laboratories (including specimen collection facilities and radiology facilities) and make recommendations to ensure appropriate use of these facilities (see Recommendations 5.4.7 and 5.4.8).

18.0 Consumer Behaviour

BARRIER: Inappropriate expectations of the health care system and inappropriate behaviour by consumers creates excess utilization.

There is no doubt that some of the excessive use of the health care system is caused by consumers. This may result, on one hand, from inappropriate expectations of what the health system can and cannot do and, on the other, from a lack of understanding about how to use the system properly. There is still a stigma attached to using mental health and social services, even though these may be most appropriate for the patient's needs. Medical care is too often seen as a preferred source of services. Institutional care of the elderly is a consumer-driven demand rather than a system or provider-driven one. Finally, inappropriate lifestyle choices lead to morbidity and mortality that could be prevented.

18.1 Consumer-driven Utilization

Our health care system prides itself on being equally accessible to all; there are no disincentives for inappropriate use. In 1986-87, for example, some 460,750 Albertans saw the same or other physicians within the a seven-day period. Many of these encounters were for minor, self-limiting illnesses. Patients often turn to physicians for drugs to resolve marital, work, or other personal problems.

The medical examination is seen by some as the primary function of the health care system. It may be abused by the worried-well and used by others to document absence from work. Such exams rarely result in early detection of abnormalities and most frequently serve to provide a false sense of security to patients. Many recent papers in highly respected, peer-reviewed, medical journals report research results demonstrating that the "check-up" is not a particularly accurate diagnostic tool and that common symptoms rarely result in findings of significant pathology.

Commercial exploitation of health care services is affecting consumers demand. For example, drug companies are now placing subtle advertisements encouraging consumers to seek treatment for male pattern baldness. In other cases, magazine articles or television shows cause patients to demand a specific diagnostic test. Recent publicity concerning high- and low-density lipoproteins is creating a demand for elegant laboratory studies when a progressive screening approach beginning with a simple serum cholesterol is more appropriate.

The *Canada Health Act* has outlawed any direct charges to consumers for medically required services. The accessibility and comprehensiveness provisions prevent provincial governments from taking meaningful action against patients who clearly abuse the health care system. While few patients overtly misuse the system, there is evidence that a significant number of individuals will experience multiple medical encounters in a brief time span for minor illnesses. In aggregate, these unnecessary primary care visits contribute an enormous cost to the health care system. As the decision to seek primary care is most often a personal decision on the part of the patient, a large proportion of the significant annual increase in office visits is due to consumer demand.

18.2 Lifestyle Choices and Utilization

Our fast-paced, achievement-oriented society is overly stressful for some. Individuals may try to cope by using self-destructive behaviours such as eating or drinking too much, working too hard, smoking too much, engaging in promiscuous behaviour, or habituation or addiction to mood altering drugs. These behaviors have a significant impact on utilization.

Promiscuity, for example, results in increased use of health-care to treat sexually transmitted diseases and unwanted pregnancies. While AIDS has received considerable attention, the cost to the health care system for treatment of sexually transmitted diseases and unwanted pregnancies far exceeds the cost for treatment of AIDS. Alcohol abuse and alcoholism increase health-care use through alcohol-related diseases such as cirrhosis and portal hypertension. Alcohol also contributes to mortality and morbidity through motor vehicle and other accidents and family violence. The health dangers of obesity, smoking, and drug abuse are similarly well known.

The health care costs for inappropriate lifestyle choices can be staggering. Some research indicates that between 10% and 30% of patients in active treatment hospitals are there because of illnesses that are in some way alcohol related. Studies at the Trauma Unit at Sunnybrook Medical Centre in Toronto indicate that a significant portion of those treated for life-threatening multiple trauma were, at one time or another, victims of family violence. Smoking, obesity, alcohol and drug abuse and other "diseases of excess" contribute large numbers of patients annually to the health care system; the resulting diseases are often chronic and extremely expensive to treat.

18.3 The "Medicalization" of Social Problems

In a radio interview on Christmas Day, 1987, the head of the Emergency Department at the Ottawa General Hospital indicated that a third of the patients seen that day were sick with minor illnesses because their doctor's offices were closed; a third were there because of alcohol- or drug-related problems; and a third were there simply because they were lonely and depressed. Because of the stigma still attached by society to social and mental health services, many patients seek medical care to resolve social and emotional concerns. The overemphasis of the health care system on organic disease has resulted in inadequate attention to the need for services that address social or emotional difficulties.

Our highly developed and at times paternalistic health care system has allowed society to abrogate traditional family responsibilities. This is perhaps best exemplified by dumping elderly patients in emergency rooms so that they can be placed elsewhere. It is no accident that there is increasing demand for group homes, homes for unwed mothers, half-way homes, homes for abused women and alcoholics. Families who depend on two or more incomes to make ends meet have little time left to care for those who are non-productive or incapacitated.

Moreover, the institutional focus of our system has not allowed for the development of appropriate alternatives. Many of our elderly, for example, could remain in their own homes with effective home care or day care facilities. The hospital emergency department is often turned to as a resource because social and mental health programs are not available after 5:00 p.m. or on weekends. We have not explored the benefits that could accrue from respite care facilities to take pressure off a family caring for loved ones who are ill or incapacitated.

Nor have we developed reactive social service programs that are available on a 24-hour per day basis, and which could address problems of a social rather than a physical nature.

Lastly, our society has difficulty accepting the concept of death. Patients and families often want everything possible to be done to avoid dying. Once treatment is started, it is difficult for many physicians to discontinue it. The cost of doing "everything possible" to prolong life can be staggering in terms of financial, social, cultural, and emotional resources.

18.4 Measures Designed to Address Inappropriate Consumer Expectations and Behaviours

The Advisory Committee recognizes that while inappropriate consumer expectations and behaviours result in increased use of health care services in Alberta, these issues are extremely difficult to address. The measures proposed below are just a few possible strategies which may assist in improving utilization and the quality of care. The reader is also referred to Chapter 9, "Communications."

18.4.1 **Consumer Education:** Alberta Health should develop consumer education programs about the appropriate use of the health care system. Intensive efforts should be directed at teaching people about self care for minor illnesses, including simple decision rules as to when to seek medical attention (see Recommendations 9.4.1 and 9.4.2).

18.4.2 **Early Education:** As many health-damaging habits are hard to change in adults, considerable emphasis should be placed in educating primary and secondary school children regarding health, healthy lifestyle choices, and self care. High quality curriculum units must be developed and integrated into the education system (see Recommendations 9.4.1 and 9.4.2).

18.4.3 **Regulate Advertising:** The Government of Alberta should investigate strategies to prohibit advertising by drug companies and other manufacturers directly to the public for products or services that are only obtainable through a physician.

18.4.4 **Deinsure Unnecessary Services:** Claims for visits to physicians for services that are not medically necessary, such as to obtain a prescription for treatment of male pattern baldness, should be disallowed and should be the responsibility of the patient. Costs associated with hospital care for items recently removed from the Schedule of Medical Benefits as being not medically necessary (such as cosmetic surgery) should become the responsibility of the patient (see Recommendation 18.4.10).

18.4.5 **Alternative to Institutional Care:** As noted elsewhere in our report, there needs to be a concerted investigation of alternatives to institutional care such as quick response teams, respite care programs, home care, day care services and the like as a means of providing alternatives to institutional care. Strategies to avoid hospital admission should be implemented (see Recommendations 12.2.3, 14.2.5, 14.2.6, 14.2.8, 14.2.9 and 18.4.6).

18.4.6 **Incentives for Family Care:** Tax-related incentives to encourage families to look after dependent family members rather than relying on public resources should be investigated. In the long run, carefully structured tax incentives will cost considerably less than publicly funded treatment programs and will be consistent with the Alberta Government's social policy statement.

18.4.7 **Substance Abuse:** Funding should be expanded for the early identification and treatment of alcohol and substance abuse. As well, legislative activity directed at eliminating smoking should be encouraged.

18.4.8 **Family Violence:** The provision of resources to detect and deal with family violence should be an urgent priority because of the long term associated social and health care costs.

18.4.9 **Identification of High-Use Patients:** The Alberta Health Care Insurance Plan should develop a process for identifying registrants who are high users of medical services for minor complaints and target an education strategy to this group (see Recommendation 5.4.3).

18.4.10 **Consumer Accountability:** The lack of accountability and the absence of financial disincentives for inappropriate consumer use of medical services contribute to excessive health care costs. Approaches to encourage more appropriate patient use should be investigated. These could include:

i. Determination of individual and family AHCIP premiums on the basis of the previous year's utilization, similar to the approach used for other types of insurance;

ii. Taxing back to individuals a portion of the cost paid on their behalf by AHCIP for health care services;

iii. Deletion of items from the Schedule of Medical Benefits and the Hospitalization Benefits Plan which are not medically necessary (see Recommendation 18.4.4).

iv. Establishment of a claims review panel, including professional and consumer representatives, to review AHCIP claims submitted on behalf of patients. The panel would determine whether such visits were unnecessary and provide a mechanism for AHCIP to recover cost of fees paid to physicians for unnecessary patient-generated services.

19.0 Evaluation and Research

BARRIER: Alberta's failure to encourage and fund health services research has delayed opportunities to find more cost-effective means of delivering health care services.

While Alberta has been a leader in funding biomedical research, it spends very little on health services research. This research includes: cost effectiveness studies of health care; studies into alternative delivery systems with respect to where and by whom care is delivered; studies of regionalization and rationalization of care; investigations into quality of care; studies regarding outcomes and the effectiveness of care; evaluation of new and emerging technology; epidemiological research including environmental health and toxicology; and development of health promotion and preventive strategies.

Very little evaluation or research is directed to the effectiveness of expenditures or the desirability of alternative systems in Alberta. Much of what is practiced today in clinical medicine has not be subjected to rigorous evaluation. New programs or technology that promise a variety of benefits in project proposals are rarely evaluated in terms of their actual results. Finally, too often the research lessons are not implemented. All of these failures deny our health care system opportunities to improve cost-effectiveness and quality of care.

19.1 Insufficient Funding for Health Care Research

At the present time, there is little identifiable funding provided for health services or health care research in Alberta or Canada. The primary granting agency that supports this type of work, the National Health Research and Development Program, has a fraction of the resources of the Medical Research Council of Canada. Funding agencies such as the Medical Research Council of Canada and the Alberta Heritage Foundation for Medical Research have always given higher priority to research in the basic science and clinical areas. Health research is not part of the mission of Alberta Health in spite of the fact that the department spends the largest portion of Alberta's provincial budget in support of health care. There is no identifiable champion or funding agency for health care evaluation and research.

19.2 A Shortage of Research Manpower

One of the inevitable consequences of a lack of funding has been a failure on the part of universities to develop adequate education and training programs to produce skilled manpower capable of conducting evaluation and research. Lack of funding for programs, limited and constrained university budgets, and a lack of research dollars have all combined to create a serious shortage of adequately trained health care researchers. Insufficient training stipends and fellowships, a shortage of role models, and a failure in Alberta to develop a critical mass for health services research has left limited training opportunities for the next generation of Albertan researchers.

19.3 Public Image of Health Care Research

Unfortunately, the perception of health care research lacks glamour, prestige, and immediacy. It is seen as passive and reactive and therefore lacking in innovation or creativity. Some argue that change in the health care system has never been founded on planned evaluation or assessment but has more often resulted from political priorities. There have been very few proactive experiments. Universities, medical schools, and teaching hospitals have assigned low priority to this field and have placed much greater emphasis on clinical research. There is an attitude that health care research is part and parcel of clinical care and should be conducted as a component of patient care.

19.4 Why Health Services Research is an Urgent Priority for Alberta

Alberta currently spends more per capita than any other province in Canada on health care. It has built a very large and well resourced health care system and has, for the most part, been able to meet all of the expectations of the citizens of Alberta. Our state-of-the-art facilities and equipment lead Albertans to expect and obtain an unsurpassed level of care.

There is evidence, however, that growing demands on the health care system may not be easy to meet in the future. Alberta's uncertain economy has led to provincial deficits in recent years. As health care consumes the largest portion of the provincial budget, it will not be immune to external economic forces. While Alberta has a relatively young population, there will be further demands on the health care system as it ages. The growing incidence of diseases such as AIDS and Alzheimer's disease will cause greater strain.

The demands for better salaries and working condition among health care professionals will make health care more expensive in the future. As new technology is introduced, there will be continuing demands to make such technology immediately available. Use of health services continues to grow although the rate of increase has recently moderated. Alberta still has time to correct some of the deficiencies in its health care system and to respond to needs and challenges. Appropriate responses, however, will only be developed through effective programs of health services research. We need to find ways to make the best use of our facilities and to balance institutional care with alternative forms of care such as ambulatory medicine, home care and day care. Unlike other provinces where the proportion of the elderly is already significantly over 10%, Alberta has an opportunity to find optimal ways to provide care and services for the aged at the best cost. We have a great deal of new technology in hospitals and health care facilities as a result of an ambitious hospital reconstruction program which commenced in the '70s but as this equipment begins to age, replacement decisions should be based on evaluation and research rather than demand and pressure.

Finally, Alberta is fortunate to have some significant resources with which to begin developing health care research programs of international calibre. The Health Services Administration program at the University of Alberta is highly regarded nationally, both for the quality of its education and for research. The Department of Community Health Sciences at the University of Calgary offers one of the strongest community medicine and clinical epidemiology programs in North America. Both universities have resources that could form the foundation for a strategy to train health care researchers who could serve as leaders in developing an aggressive health services research program for Alberta.

19.5 Strategies for Health Care Evaluation and Research

The Advisory Committee feels that the development and implementation of a health care research strategy is fundamental to the improvement and cost effectiveness of Alberta's health care system. The committee's deliberations were frequently hampered by an absence of data and research. Little in the way of appropriate policy can be developed unless there is an underpinning of research. Accordingly, the committee makes the following recommendations for the development and implementation of a health services research strategy:

19.5.1 **Health Services Research Agency:** A health services research agency similar to the Alberta Heritage Foundation for Medical Research should be created. This could serve as an advocate for health services research and as a granting agency. Its first priority would be to create an awareness of the need and importance of health care research.

19.5.2 **University Funding:** The Universities of Alberta and Calgary should receive direct funding for the creation of multidisciplinary health services research units. These would serve as a focus for the development of a critical mass of expertise in this area. They would provide training and role models for students.

19.5.3 **Funding Health Care Research:** Alberta should devote at least one per cent of its annual public expenditures on health care to health care evaluation and research. Such funding should be redirected from existing expenditures to the proposed Health Services Research Agency. In addition to funding health policy research units, the funding agency should make monies available to individuals and institutions. Money would be allocated using a formal application and peer review process similar to that used by the Medical Research Council of Canada, Alberta Heritage Foundation for Medical Research, and the National Health Research and Development Program.

19.5.4 **Research by Smaller Institutions:** The funding agency should encourage smaller institutions and programs, not traditionally involved in research activities, to plan and develop research programs. This would allow them to gain familiarity with the research process and to conduct research designed to meet their specific needs.

19.5.5 **Policy on New Technology:** Alberta Health should institute a policy that technology new to the province will be introduced only at a limited number of sites. It will not be extended to other institutions until the completion of evaluations (see Recommendation 12.3.11).

19.5.6 **Permanent Funding for Programs:** Permanent funding should be put into place for new programs only after a formal evaluation of such programs has been completed (see Recommendation 16.3.4).

19.5.7 **Research-Policy Integration:** Every effort should be made to integrate research findings into the government policy process. Findings should also be made widely available for application in institutions and programs in management and clinical care.

20.0 Manpower Planning

BARRIER: There does not appear to be a system in place that adequately anticipates changing manpower requirements and signals the need for change.

All health services are by their nature, labour intensive. The knowledge explosion has created tremendous specialization among health care workers, evident in the increased number of health occupations and the development of specialties and subspecialties. Too many or too few health professionals of a particular kind or in a particular geographical area can serve as a barrier to cost-effective health care, either by making services unavailable or by creating pressures for excess utilization. Manpower planning which matches resources with need is a strategy for avoiding manpower supply difficulties.

20.1 Is There a Manpower Planning System in Place and Is It Functional?

For some years, the Alberta Health and Social Services Disciplines Committee has met to study and recommend action with respect to "human service occupations" in the province. Their annual report, which contains statistics pertaining to the availability of professionals, usually expressed in terms of population ratios, has often been contested by stakeholder groups as either over- or underestimating manpower needs.

Nursing and medicine, as the largest health professions, serve as interesting examples of difficulties associated with manpower planning. At present, there are more nurses entering the workforce than ever before. Yet there appears to be a shortage of nurses, at least in some specialized areas. Preliminary statistical data obtained from the Alberta Association of Registered Nurses indicates the number of vacancies has decreased from 521 for September of 1988 to 265 for January of 1989. The percentage of nurses in Alberta employed in a part-time capacity in Alberta has increased from 20% in 1970 to approximately 50% in 1989.

While the vast majority of people who obtain medical training remain in the workforce, there have been changes in the demography of the profession and working styles. In the past decade, the female proportion of medical school classes have increased from 10% to 45%. Female physicians work an estimated 60% to 80% as much as their male counterparts. There appears to be a trend for all physicians to work shorter hours than was the case in the past. Finally, most statistics simply assume that physicians are involved in clinical activities. They do not account for the number of physicians who are not in practice at all or for the time spent by physicians in teaching, administration, and research activities.

Part of the difficulty with health care manpower planning results from overlapping areas of responsibility and self-interest on the part of stakeholder groups. The roles of many health disciplines overlap. The issue is also clouded by competing interests among educational institutions, teaching hospitals and occupational/professional associations. Various groups take different stands on the need for training programs, education standards and optimum numbers of personnel. There is no consensus on the statistical interpretation of currently available manpower data in any field. The major area of contention appears to concern the functional definition of how many individuals and how productive each individual is within any profession. Until consensus is achieved, there will be no satisfactory agreement on manpower issues.

20.2 A Proposed Manpower Planning Strategy

The lack of cooperation between stakeholders and manpower planning in each health care discipline represents a major impediment to matching resources effectively with need. Because of the controversial nature of much manpower information and analysis, it will be difficult to arrive at a consensus on which planning strategy to use. The Advisory Committee's recommendations on developing and implementing manpower planning strategies are to be found in Chapter 8, "Manpower."

Section IV: Conclusion

At the outset of our report, the Minister's Advisory Committee on the Utilization of Medical Services observed that Alberta has a very good health care system. Our objective has been to make it better, and we have advanced a number of recommendations which we think will do so. As we enter the next decade, it is likely that continuing upward pressure on the costs of health care and the uncertain ability of Alberta's economy to fund the standard of health services that we have come to expect will make change imperative.

Our deliberations have caused us to conclude that no one group can be blamed for any failures that exist to optimally utilize our health care system. We have determined that there are system features which do not result in adequate control or encourage appropriate utilization. It is true that there are some providers, whether they be institutions or practitioners, that provide health care services without any concern for cost. Likewise, there are consumers who are irresponsible in the use of our health care resources. But our sense is that the numbers of institutions and organizations who exhibit this behaviour are small. Rather, our failure to prudently manage our health care resources as optimally as we might results from an incredibly complex array of interrelationships and from actions or decisions which are in themselves trivial but when aggregated across the system, become enormously expensive.

Albertans have traditionally been inventive and ingenious in overcoming dilemmas which we have faced. The cooperative nature of the prairie spirit and the commitment of all Albertans, including providers, to the highest standard of health care possible leads us to the conclusion that through dialogue with stakeholders, the cost of our health care system can be controlled within the revenues available. We have proposed specific measures and approaches to accomplish that and the Minister's Advisory Committee on the Utilization of Medical Services sincerely hopes that the Minister will find our suggestions worthwhile and deserving of implementation.

Implementation of our recommendations will take considerable time and energy, funding, and in some cases substantial political will. It is the opinion of the Minister's Advisory Committee on the Utilization of Medical Services, however, that failure to begin to address these issues now will require more draconian and less palatable measures later.

Section V: Appendices

1. Committee Members
2. Original Terms of Reference
3. Amended Terms of Reference
4. Tables: Chapter 1: Introduction
5. Tables: Chapter 4: Consultations
6. Tables: Chapter 6: Minor Surgery
7. Tables: Chapter 7: Office Visits
8. Tables: Chapter 8: Manpower
9. List of Background Reports
10. List of Recommendations
11. Index to Recommendations

Appendix 1: Committee Members

Dr. M. Watanabe (Chairman)	Dean, Faculty of Medicine, University of Calgary
Ms. C. Cook (from November 1987)	Home Care Program Manager, Lethbridge Health Unit
Dr. R.C. Cooper	Family Practice, Red Deer
Dr. A.V. Follett (to November 1987)	Senior Medical Consultant, Alberta Hospitals and Medical Care
Dr. C.B. Hatfield	General Internist, Foothills Hospital, Calgary
Mr. D.J. Junk (from May 1988)	Assistant Deputy Minister, Policy and Planning Services, Alberta Health
Ms. M. Kroon (from November 1987)	Coordinator Professional Services, Alberta Health
Ms. S. Larsen (from July 1988)	Staff Nurse, University of Alberta Hospitals, Edmonton
Dr. D. Linden	Resident in Internal Medicine, University of Calgary, presently General Internist, Calgary General Hospital
Dr. G.F. MacDonald	Medical Director, Respiratory Therapy Department, Grey Nuns Hospital, Edmonton
Mr. C.A. MacKenzie	Senior Advisor on Health Issues, Alberta Health
Dr. D. Phillipon (to May 1988)	Assistant Deputy Minister, Hospital Services, Alberta Health
Mr. S. Rowand	Vice President, Corporate Development, Foothills Hospital, Calgary
Ms. S. Snell	Director, Education and Development, Red Deer Regional Hospital Centre
Dr. D.G. Young	Chief/Director, Laboratory Medicine, Misericordia Hospital, Edmonton

Staff:

Dr. W. Chang (to January 1, 1989)	Hospital Funding Consultant, Alberta Health
Mr. J. McDonough (from January 1, 1989)	Manager, Federal-Provincial Relations, Alberta Health

Appendix 2: Original Terms of Reference

To advise the Minister of Hospitals and Medical Care with respect to the implementation of the recommendations of the Utilization Committee Report (1985) related to reducing or controlling increases in the utilization of medical services, and in particular:

1. Setting guidelines for use of consultant services.
2. Rapid growth in minor surgical procedures.
3. Rapid growth in pathology services.
4. Shifting in location of pathology services as between provincial, hospital and private laboratories.
5. Identification of diagnostic procedures undergoing rapid growth and advise on steps for controlling.
6. Review ambulatory care services delivery with a view to recommending funding approaches, which encourage the most economical delivery system.
7. Review utilization and advise on problem areas related to medical service utilization.
8. Review utilization of walk-in and extended hour clinics.
9. Develop methods of communicating utilization patterns leading to higher costs to providers and the public.
10. Review the increase in numbers of physicians relative to the population and its impact on the utilization of medical services.
11. Advise on such matters as may be referred to the Committee by the Minister from time to time or, with the agreement of the Minister, as may be recommended by the Committee.

Appendix 3: Amended Terms of Reference

A. To advise on the implementation of recommendations of the Utilization Committee Report related to reducing or controlling increases in the utilization of medical services, and in particular to:

1. Analyze the growth and make recommendations pertaining to the appropriate use of (a) consultant services, and (b) minor surgical services.

2. Identify reasons for the rapid growth in pathology and other diagnostic services, and (a) recommend guidelines for appropriate use, and (b) document shifts in performance of pathology services as between private labs, hospital and provincial laboratory, and recommend the most cost-effective point of performance.

3. Recommend effective communication strategies for influencing utilization of health care services by users and providers, including suggested vehicles of communication.

4. Make recommendations pertaining to the development of information systems which facilitate collection and analysis of data from all components of the health care system.

5. Review the Schedule of Medical Benefits with a view to recommending (a) structural improvements to aid clarity and understanding, (b) reduction of fee inequities, (c) improvements to the Schedule to better enable utilization review, and (d) the linkage of data for procedures and services performed in hospitals, private and provincial laboratories.

B. To propose strategies for achieving cost-efficient methods of delivering health care services that are consistent with goals for health care in Alberta.

C. To review Physician Manpower statistics and the relationship to health care utilization and costs, and advise on strategies to achieve optimal physician numbers and distribution in Alberta.

D. To advise on such matters as may be referred to the Committee by the Minister from time to time or, with the agreement of the Minister, as may be recommended by the Committee.

Appendix 4: Tables — Chapter 1: Introduction

Table 4.1 — Population Data for the Years Ended March 31, 1980 to 1989

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
AHCIP Alberta Registered Persons(a)	2,186,456	2,306,428 5.49%	2,423,043 5.06%	2,464,253 1.70%	2,443,943 –0.82%	2,399,690 –1.81%	2,443,244 1.81%	2,462,017 0.77%	2,480,943 0.77%	2,518,973 1.53%
Alberta Population from Statistics Canada (b)	2,127,500	2,226,000 4.63%	2,302,800 3.45%	2,336,500 1.46%	2,338,800 0.10%	2,334,400 0.24%	2,368,200 1.02%	2,378,000 0.41%	2,388,100 r 0.42%	2,423,200 1.47%
Discrete Patients (Medical) (a)	1,784,045	1,879,463 5.35%	1,943,145 3.39%	2,041,349 5.05%	2,065,094 1.16%	2,075,464 0.50%	2,133,476 2.80%	2,174,077 1.90%	2,187,509 0.62%	2,206,262 0.86%
In-Province Medical Practitioners (a)	2,644	2,776 4.99%	2,909 4.79%	3,071 5.57%	3,233 5.28%	3,353 3.71%	3,554 5.99%	3,676 3.43%	3,829 4.16%	3,905 1.98%

r: revised

Notes:

1. AHCIP Alberta registered persons as at March 31, 1980 to 1989.
2. Alberta population from Statistics Canada as at April 1, 1980 to 1989.
3. For 1979-80 to 1987-88, discrete medical patients refer to the number of Alberta residents for whom at least one medical service was paid during the year to a medical practitioner inside or outside of Alberta. For 1988-89, discrete medical patients refer to the number of Alberta residents for whom at least one medical service was paid during the year to a medical practitioner inside or outside of Alberta, with the exception of out-of-province practitioners within participating provinces and territories who had their claims paid under the medical reciprocal process. The figure for 1988-89 is preliminary.

Source:

(a) Alberta Health Care Insurance Plan, "Annual Report" for the years ended March 31, 1980 to 1985; Alberta Health Care Insurance Plan, "Statistical Supplement" for the years ended March 31, 1986 to 1988 and unpublished preliminary data for the year ended March 31, 1989.

(b) Statistics Canada, "Quarterly Estimates of Population for Canada, the Provinces and the Territories", Catalogue No. 91-001, Quarterly, (Population figures are as at April 1 of each year.)

Table 4.2 — Alberta Population by Age Group in Thousands as of June 1, 1980 to 1988

	Age Group							
	Under 1	**1-4**	**5-14**	**15-24**	**25-44**	**45-64**	**65+**	**Total**
1980	38.0	141.4	346.6	462.4	644.1	350.1	158.0	2,140.6
1981	40.1	147.8	353.7	478.6	694.7	359.0	163.4	2,237.3
1982	43.4	153.4	358.2	482.9	743.4	369.1	168.1	2,318.5
1983	40.3	156.8	357.3	468.7	775.8	377.2	173.9	2,350.0
1984	45.8	161.2	352.1	440.9	789.2	381.4	178.3	2,348.9
1985	45.5	165.6	347.3	421.8	798.9	384.9	184.8	2,348.8
1986 (a)	42.1	163.0	356.3	407.1	815.0	391.1	191.3	2,375.3
1987	42.8	163.4	357.0	398.3	824.6	395.9	198.4	2,380.4
1988	43.5	164.3	359.6	388.3	836.4	403.5	205.5	2,401.1

Notes: (a) Statistics Canada, 1986 Census of Canada. Sum of population by age group equals 2,365.9 due to incomplete enumeration of Indian Reservations.

Source: Statistics Canada, "Postcensal Annual Estimates of Population by Marital Status, Age, Sex and Components of Growth for Canada, Provinces and Territories," Catalogue No. 91-210, 1980 to 1985.as of January 1986 revision, and 1986 to 1988 as of January 1989 revision.

Table 4.3 — Alberta Medical Practitioners by Speciality for the Years Ended March 31, 1980 to 1989

	1980	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**
General Practitioners	1,484	1,558	1,656	1,749	1,834	1,921	2,040	2,074	2,149	2,173
% Change		4.99%	6.29%	5.62%	4.86%	4.74%	6.19%	1.67%	3.62%	1.12%
Medical Specialties	547	586	615	671	712	737	792	855 *	881 *	922 *
% Change		7.13%	4.95%	9.11%	6.11%	3.51%	7.46%	7.95%	3.04%	4.65%
Surgery Specialties	482	496	500	504	524	529	543	549	562	571
% Change		2.90%	0.81%	0.80%	3.97%	0.95%	2.65%	1.10%	2.37%	1.60%
Lab Specialists	37	42	39	44	46	45	46	49	78 **	86 **
% Change		13.51%	–7.14%	12.82%	4.55%	–2.17%	2.22%	6.52%	59.18%	10.26%
X-Ray Specialists	94	94	99	103	117	121	133	149	159 **	153 **
% Change		0.00%	5.32%	4.04%	13.59%	3.42%	9.92%	12.03%	6.71%	–3.77%
Total	**2,644**	**2,776**	**2,909**	**3,071**	**3,233**	**3,353**	**3,554**	**3,676**	**3,829**	**3,905**
% Change		**4.99%**	**4.79%**	**5.57%**	**5.28%**	**3.71%**	**5.99%**	**3.43%**	**4.16%**	**1.98%**

* A new medical specialty of Emergency Medicine was established for purposes of statistical reporting, beginning with the 1986-87 fiscal year. This new specialty consists of physicians who have a specialty certification in Emergency Medicine. Prior to 1986-87, these practitioners were classified as General Practitioners.

** The Alberta Health Care Insurance Plan changed its procedure for the billing of laboratory services by medical practitioners within clinics. Effective August 1, 1987, all existing pathology and radiology laboratories within clinics were assigned specific billing numbers of the laboratory facility was accredited by the College of Physicians and Surgeons of Alberta. If a clinic had both accredited pathology and radiology laboratories, a separate billing number was assigned to each laboratory facility. All new clinic laboratories were registered with specific billing numbers from this date onwards.

Laboratory services provided on or after August 1, 1987 by these clinic laboratories were submitted and paid under the specific pathology and radiology billing numbers of the clinic. Prior to August 1, 1987, the laboratory services provided by these clinic laboratories were submitted and paid under the billing number of the practitioner in the clinic who ordered the service.

Due to this change in billing procedure, the data for the specialties of laboratory/pathologists and laboratory/radiologists for 1987-88 and 1988-89 are not comparable to the data for previous years. Some caution, therefore, is recommended in the interpretation of these figures.

Note: Includes Alberta medical practitioners who received a payment from the Alberta Health Care Insurance Plan during the fiscal year.

Sources: Alberta Health Care Insurance Plan, "Annual Report" for the years ended March 31, 1980 to 1985; Alberta Health Care Insurance Plan, "Statistical Supplement" for the years ended March 31, 1986 to 1988; and unpublished preliminary data for the year ended March 31, 1989.

Table 4.4 — Number of Services and Amounts Paid for Alberta Residents by Type of Service for the Years Ended March 31, 1980 to 1988

	1980 Services Amt Paid	1981 Services Amt Paid	1982 Services Amt Paid	1983 Services Amt Paid	1984 Services Amt Paid	1985 Services Amt Paid	1986 Services Amt Paid	1987 Services Amt Paid	1988 Services Amt Paid	9 year % Services Amt Paid	Average Annual % Change
Consultations	458,180	498,167	541,906	627,760	681,875	730,522	782,306	837,996	848,146		
		8.73%	8.78%	15.84%	8.62%	7.13%	7.09%	7.12%	1.21%	85.11%	8.00%
	$15,867,801	19,491.392	25,168,449	32,547,705	36,798,102	40,534,520	43,312,802	48,801,516	49,240,679		
		22.84%	29.13%	29.32%	13.06%	10.15%	6.85%	12.67%	0.90%	210.32%	15.21%
Office Visits	6,827,032	7,275,282	7,640,694	8,448,907	8,853,997	9,283,235	10,028,352	10,762,198	10,853,382		
		6.57%	5.02%	10.58%	4.79%	4.85%	8.03%	7.32%	0.85%	58.98%	5.97%
	$93,013,293	112,551,756	141,511,989	175,456,491	189,190,148	198,074,742	213,871,727	240,020,313	240,907,801		
		21.01%	25.73%	23.99%	7.83%	4.70%	7.98%	12.23%	0.37%	159.00%	12.63%
Hospital Visits	1,766,238	1,714,181	1,704,808	1,905,372	1,905,478	1,844,015	1,876,983	1,874,111	1,730,831		
		−2.95%	−0.55%	11.76%	0.01%	−3.23%	1.79%	−0.15%	−7.65%	−2.00%	−0.25%
	$17,203,550	19,337,134	23,173,577	32,281,941	34,163,284	28,006,124	28,742,596	30,285,326	28,274,706		
		12.40%	19.84%	39.30%	5.83%	−18.02%	2.63%	5.37%	−6.64%	64.35%	6.41%
Special Visits	194,176	185,217	193,557	211,772	207,483	363,169	379,914	378,661	362,423		
		−4.61%	4.50%	9.41%	−2.03%	75.04%	4.61%	−0.33%	−4.29%	86.65%	8.11%
	$2,812,564	3,061,387	3,778,771	5,101,962	5,168,665	12,553,680	13,132,141	13,569,451	12,822,048		
		8.85%	23.43%	35.02%	1.31%	142.88%	4.61%	3.33%	−5.51%	355.88%	20.88%
Major Surgery	139,471	142,955	144,599	169,403	173,570	187,415	196,711	208,725	203,439		
		2.50%	1.15%	17.15%	2.46%	7.98%	4.96%	6.11%	−2.53%	45.86%	4.83%
	$21,778,780	24,374,870	28,791,433	37,050,663	39,349,409	42,803,726	45,426,909	49,932,649	49,102,354		
		11.92%	18.12%	28.69%	6.20%	8.78%	6.13%	9.92%	−1.66%	125.46%	10.70%
Minor Surgery	208,938	231,211	240,195	262,487	271,864	283,158	289,169	287,261	260,047		
		10.66%	3.89%	9.28%	3.57%	4.15%	2.12%	−0.66%	−9.47%	24.46%	2.77%
	$5,197,866	6,329,592	7,510,093	8,450,072	8,349,837	9,638,909	10,186,430	10,791,687	10,629,481		
		21.77%	18.65%	12.52%	−1.19%	15.44%	5.68%	5.94%	−1.50%	104.50%	9.35%
Surgical Assists	59,425	63,159	60,550	67,548	66,937	72,501	76,654	78,872	75,527		
		6.28%	−4.13%	11.56%	−0.90%	8.31%	5.73%	2.89%	−4.24%	27.10	3.04%
	$1,362,924	1,606,029	1,874,185	2,412,539	2,435,883	2,751,843	2,839,384	3,031,236	2,943,767		
		17.84%	16.70%	28.72%	0.97%	12.97%	3.18%	6.76%	−2.89%	115.99%	10.10%
Obstetrics	47,690	49,773	53,242	56,471	56,206	55,535	56,186	57,147	54,627		
		4.37%	6.97%	6.06%	−0.47%	−1.19%	1.17%	1.71%	−4.41%	14.55%	1.71%
	$7,426,712	9,291,720	11,493,440	13,442,851	13,849,730	15,067,417	15,116,804	18,412,960	20,082,060		
		25.11%	23.70%	16.96%	3.03%	8.79%	0.33%	21.80%	9.06%	170.40%	13.24%
Anaesthesia	309,156	319,604	332,765	384,231	392,017	420,292	442,491	448,749	447,652		
		3.38%	4.12%	15.47%	2.03%	7.21%	5.28%	1.41%	−0.24%	44.80%	4.74%
	$10,300,603	12,228,860	14,462,432	18,593,620	19,106,169	21,289,505	22,255,801	24,810,603	24,569,083		
		18.72%	18.26%	28.56%	2.76%	11.43%	4.54%	11.48%	−0.97%	138.52%	11.48%
Radiology Services	644,455	658,334	659,033	695,321	710,031	738,496	776,379	824,364	837,854		
		2.15%	0.11%	5.51%	2.12%	4.01%	5.13%	6.18%	1.64%	30.01%	3.33%
	$12,303,679	13,748,070	16,811,104	19,599,813	20,756,589	21,732,607	23,156,557	25,430,640	26,604,302		
		11.74%	22.28%	16.59%	5.90%	4.70%	6.55%	9.82%	4.62%	116.23%	10.12%
Pathology Services	4,734,612	5,222,327	5,682,536	6,403,106	6,872,645	7,317,076	8,018,846	8,523,669	8,432,862		
		10.30%	8.81%	12.68%	7.33%	6.47%	9.59%	6.30%	−1.07%	78.11%	7.48%
	$28,625,884	35,078,876	45,273,490	59,158,932	70,282,000	76,924,506	86,200,013	98,999,663	99,221,926		
		22.54%	29.06%	30.67%	18.80%	9.45%	12.06%	14.85%	0.22%	246.62%	16.81%
Other Diagnostic	1,294,502	1,399,327	1,487,124	1,640,256	1,832,493	1,945,304	2,034,125	2,202,271	2,197,976		
		8.10%	6.27%	10.30%	11.72%	6.16%	4.57%	8.27%	−0.20%	69.79%	6.84%
	$10,395,901	12,510,220	15,933,195	21,727,665	25,503,240	28,001,501	30,329,656	34,003,304	34,923,249		
		20.34%	27.36%	36.37%	17.38%	9.80%	8.31%	12.11%	2.71%	235.93%	16.35%
Miscellaneous	70,495	163,291	192,427	227,122	247,041	299,172	349,598	380,720	394,568		
		131.63%	17.84%	18.03%	8.77%	21.10%	16.86%	8.90%	3.67%	459.89%	24.03%
	$904,020	1,951,155	2,786,845	3,794,634	4,324,133	5,105,434	6,031,314	7,381,722	8,131,932		
		115.83%	42.83%	36.16%	13.95%	18.07%	18.14%	22.39%	10.16%	799.53%	31.60%
Total	16,754,370	17,922,828	18,933,436	21,099,756	22,271,637	23,539,890	25,307,714	26,864,744	26,699,461		
		6.97%	5.64%	11.44%	5.55%	5.69%	7.51%	6.15%	−0.62%	59.36%	6.00%
	$227,193,584	271,561,064	338,569,012	429,618,893	469,277,195	502,484,514	540,602,134	605,471,070	607,453,388		
		19.53%	24.68%	26.89%	9.23%	7.08%	7.59%	12.00%	0.33%	167.37%	13.08%

Notes:

1. Sources: Service data for 1979-80 to 1983-84 — "Utilization Committee Report to the Minister, September 1985", Table 5. Service data for 1984-85 to 1987-88 — Alberta Health Care Insurance Plan (AHCIP), Claims File.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in and out of Alberta for services which were provided to Alberta residents during the years ended March 31, 1980 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. This table is an update of table 5 from the 1985 Utilization Report. Data for 1984-85 to 1987-88 were added to the table. The original specifications which were used to classify the services by type of service for 1979-80 to 1983-84 were not available. As a result, the data for 1984-85 to 1987-88 were generated based on the type of service assignment which existed within each year. There may be some differences in the classification of services by type of service during the period due to this approach.

Table 4.5 — Medical Services per 1,000 Insured Persons According to Type of Service for the Years Ended March 31, 1980 to 1988

Type of Service	1980	1981	1982	1983	1984	1985	1986	1987	1988	Grand % Change Over 9 Years	Average Annual % Change
Consultations	210	216	224	255	279	304	320	340	342		
		2.86%	3.70%	13.84%	9.41%	8.96%	5.26%	6.25%	0.59%	62.86%	6.29%
Office Visits	3,122	3,154	3,153	3,429	3,622	3,869	4,105	4,371	4,375		
		1.02%	–0.03%	8.75%	5.63%	6.82%	6.10%	6.48%	0.09%	40.13%	4.31%
Hospital Visits	752	683	645	757	779	769	768	761	698		
		–9.18%	–5.56%	17.36%	2.91%	–1.28%	–0.13%	–0.91%	–8.28%	–7.18%	–0.93%
Special Visits	144	141	138	102	84	151	155	154	146		
		–2.08%	–2.13%	–26.09%	–17.65%	79.76%	2.65%	–0.65%	–5.19%	1.39%	0.17%
Major Surgery	64	62	60	69	71	78	81	85	82		
		–3.13%	–3.23%	15.00%	2.90%	9.86%	3.85%	4.94%	–3.53%	28.13%	3.15%
Minor Surgery	96	100	99	107	111	118	118	117	105		
		4.17%	–1.00%	8.08%	3.74%	6.31%	0.00%	–0.85%	–10.26%	9.38%	1.13%
Surgical Assists	27	27	25	27	27	30	31	32	30		
		0.00%	–7.41%	8.00%	0.00%	11.11%	3.33%	3.23%	–6.25%	11.11%	1.33%
Obstetrics	22	22	22	23	22	23	23	23	22		
		0.00%	0.00%	4.55%	–4.35%	4.55%	0.00%	0.00%	–4.35%	0.00%	0.00%
Anaesthesia	141	139	137	156	160	175	181	182	180		
		–1.42%	–1.44%	13.87%	2.56%	9.38%	3.43%	0.55%	–1.10%	27.66%	3.10%
Radiology Services	295	285	272	282	290	308	318	335	338		
		–3.39%	–4.56%	3.68%	2.84%	6.21%	3.25%	5.35%	0.90%	14.58%	1.72%
Pathology Services	2,165	2,264	2,345	2,598	2,812	3,049	3,282	3,462	3,399		
		4.57%	3.58%	10.79%	8.24%	8.43%	7.64%	5.48%	–1.82%	57.00%	5.80%
Other Diagnostic & Therapeutic Services	592	607	614	666	749	811	833	895	886		
		2.53%	1.15%	8.47%	12.46%	8.28%	2.71%	7.44%	–1.01%	49.66%	5.17%
Miscellaneous	32	71	79	92	101	125	143	155	159		
		121.88%	11.27%	16.46%	9.78%	23.76%	14.40%	8.39%	2.58%	396.88%	22.19%
Total	**7,663**	**7,771**	**7,814**	**8,562**	**9,112**	**9,810**	**10,358**	**10,912**	**10,762**		
		1.41%	**0.55%**	**9.57%**	**6.42%**	**7.66%**	**5.59%**	**5.35%**	**–1.37%**	**40.44%**	**4.34%**

Notes:

1. Sources: Service data for 1979-80 to 1983-84 — "Utilization Committee Report to the Minister, September 1985", Table 5. Service data for 1984-85 to 1987-88 — Alberta Health Care Insurance Plan (AHCIP), Claims File.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in and out of Alberta for services which were provided to Alberta residents during the years ended March 31, 1980 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. This table is an update of table 5 from the 1985 Utilization Report. Data for 1984-85 to 1987-88 were added to the table. The original specifications which were used to classify the services by type of service for 1979-80 to 1983-84 were not available. As a result, the data for 1984-85 to 1987-88 were generated based on the type of service assignment which existed within each year. There may be some differences in the classification of services by type of service during the period due to this approach.

Table 4.6 — Fee for Service Items Paid to Medical Practitioners for Year Ended March 31, 1988

Medical Services	Number of Services % of total	$ Amount
Consultations	3.2	8.1
Office Visits	40.6	39.7
Hospital Visits	6.5	4.7
House Visits	1.4	2.1
Major Surgery	0.8	8.1
Minor Surgery	1.0	1.7
Surgical Assists	0.3	0.5
Obstetrics	0.2	3.3
Anesthesia	1.7	4.0
Radiology	3.1	4.4
Pathology	31.6	16.3
Other Diagnostics	8.2	5.7
Miscellaneous	1.5	1.3
Total	**100.0**	**100.0**

Services are counted on date-of-service basis. Fee-for-service items which the AHCIP paid to medical practitioners in and out of Alberta for services provided to Alberta residents.

Table 4.7 — Number of Diagnostic Radiology Services and Examinations (1) Performed in Alberta for the Years Ended March 31, 1980 to 1989

Years Ended March 31	Fee-for-Service Diagnostic Radiology Services (2)	Diagnostic Radiology Examinations (3)			
		In-Patient Services	Out-Patient Services	Total	Grand Total
1979-80	656,775	447,538	708,709	1,156,247	1,813,022
1980-81	679,833	434,552	721,674	1,156,226	1,836,059
1981-82	685,517	430,389	757,156	1,187,545	1,873,062
1982-83	772,595	494,239	795,247	1,289,486	2,062,081
1983-84	788,683	520,799	782,825	1,303,624	2,092,307
1984-85	836,319	527,508	853,164	1,380,672	2,216,991
1985-86	877,926	557,125	905,094	1,462,219	2,340,145
1986-87	927,031	575,321	961,081	1,536,402	2,463,433
1987-88	977,679	511,455	925,646	1,437,101	2,414,780
1988-89	991,275				N/A

N/A: Not available

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP), Claims File and Annual Return of Health Care Facilities as reported by Public General hospitals to Alberta Health for the years ended March 31, 1980 to 1988.
2. The above data consist of fee-for-service items which the AHCIP paid to medical practitioners in Alberta during the years ended March 31, 1980 to 1989, for services which were provided to Alberta residents. The data are compiled on a date-of-payment basis. Due to delays in the submission and processing of health care claims, the services which were paid in a year may not be the same services which were provided during the year.
3. The data are reported on a date-of-service basis.

Appendix 5: Tables — Chapter 4: Consultations

Table 5.1 — Number of Services and Amounts Paid for Alberta Residents by Type of Service for the Years Ended March 31, 1983 to 1988

	1983 Services Amt. Paid	1984 Services Amt. Paid	1985 Services Amt. Paid	1986 Services Amt. Paid	1987 Services Amt. Paid	1988 Services Amt. Paid	Average Annual % Change
Consultations	627,433	681,554	722,088	773,129	828,093	840,672	
		8.63%	5.95%	7.07%	7.11%	1.52%	6.03%
	$33,079,402	$37,664,147	$40,020,507	$42,748,524	$48,150,466	$48,747,471	
		13.86%	6.26%	6.82%	12.64%	1.24%	8.06%
Office Visits	8,438,322	8,841,571	9,130,256	9,863,905	10,571,630	10,673,599	
		4.78%	3.27%	8.04%	7.17%	0.96%	4.81%
	$175,257,141	$188,952,124	$194,683,355	$209,954,176	$235,432,108	$236,184,944	
		7.81%	3.03%	7.84%	12.13%	0.32%	6.15%
Hospital Visits	1,955,012	1,952,981	2,014,174	2,050,195	2,041,046	1,884,395	
		–0.10%	3.13%	1.79%	–0.45%	–7.68%	–0.73%
	$33,614,449	$35,491,273	$36,121,935	$37,108,757	$38,824,783	$36,124,569	
		5.58%	1.78%	2.73%	4.62%	–6.95%	1.45%
Special Visits	158,858	156,238	159,777	169,811	174,940	178,447	
		–1.65%	2.27%	6.28%	3.02%	2.00%	2.35%
	$3,723,899	$3,786,216	$3,771,366	$4,023,519	$4,253,013	$4,331,365	
		1.67%	–0.39%	6.69%	5.70%	1.84%	3.07%
Major Surgery	169,276	173,364	184,495	194,201	206,334	201,414	
		2.41%	6.42%	5.26%	6.25%	–2.38%	3.54%
	$37,355,066	$39,810,544	$42,129,146	$44,802,779	$49,316,293	$48,551,256	
		6.57%	5.82%	6.35%	10.07%	–1.55%	5.38%
Minor Surgery	264,717	274,658	280,051	286,088	283,819	257,141	
		3.76%	1.96%	2.16%	–0.79%	–9.40%	–0.58%
	$8,525,068	$8,446,352	$8,930,740	$9,239,625	$9,887,087	$10,070,405	
		–0.92%	5.73%	3.46%	7.01%	1.85%	3.39%
Surgical Assists	67,368	66,814	69,377	73,818	75,521	73,152	
		–0.82%	3.84%	6.40%	2.31%	–3.14%	1.66%
	$2,516,054	$2,579,750	$2,669,894	$2,760,552	$2,935,572	$2,873,668	
		2.53%	3.49%	3.40%	6.34%	–2.11%	2.69%
Obstetrics	56,374	56,101	54,601	55,276	56,073	53,473	
		–0.48%	–2.67%	1.24%	1.44%	–4.64%	–1.05%
	$14,513,713	$15,369,804	$14,901,036	$14,953,886	$18,210,241	$19,855,345	
		5.90%	–3.05%	0.35%	21.78%	9.03%	6.47%
Anaesthesia	383,982	391,678	410,878	432,071	436,924	437,414	
		2.00%	4.90%	5.16%	1.12%	0.11%	2.64%
	$19,249,348	$20,024,673	$20,999,575	$21,908,249	$24,410,006	$24,215,106	
		4.03%	4.87%	4.33%	11.42%	–0.80%	4.70%
Radiology Services	695,080	709,820	735,096	773,120	821,018	835,071	
		2.12%	3.56%	5.17%	6.20%	1.71%	3.74%
	$19,595,615	$20,752,681	$21,628,994	$23,055,773	$25,319,711	$26,515,007	
		5.90%	4.22%	6.60%	9.82%	4.72%	6.23%
Pathology Services	6,403,822	6,872,845	7,295,502	7,991,653	8,494,499	8,410,082	
		7.32%	6.15%	9.54%	6.29%	–0.99%	5.60%
	$59,306,685	$70,386,893	$76,758,703	$86,015,933	$98,796,781	$99,055,930	
		18.68%	9.05%	12.06%	14.86%	0.26%	10.80%
Other Diagnostic	1,641,541	1,832,621	1,932,203	2,021,761	2,186,020	2,186,071	
		11.64%	5.43%	4.64%	8.12%	0.00%	5.90%
	$21,865,575	$25,670,827	$27,693,760	$30,066,793	$33,664,038	$34,642,055	
		17.40%	7.88%	8.57%	11.96%	2.91%	9.64%
Miscellaneous	219,172	239,340	288,160	332,913	359,639	374,261	
		9.20%	20.40%	15.53%	8.03%	4.07%	11.30%
	$3,640,693	$4,151,775	$4,836,417	$5,622,461	$6,812,312	$7,551,392	
		14.04%	16.49%	16.25%	21.16%	10.85%	15.71%
Total	**21,080,957**	**22,249,585**	**23,276,658**	**25,017,941**	**26,535,556**	**26,405,192**	
		5.54%	**4.62%**	**7.48%**	**6.07%**	**–0.49%**	**4.61%**
	$432,242,708	**$473,087,059**	**$495,145,428**	**$532,261,027**	**$596,012,411**	**$598,718,513**	
		9.45%	**4.66%**	**7.50%**	**11.98%**	**0.45%**	**6.73%**

Notes:

1. Sources: Alberta Health Care Insurance Plan (AHCIP), Claims Extract File for 1982-83 data and Information Base for 1983-84 to 1987-88 data.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in Alberta for services which were provided to Alberta residents during the years ended March 31, 1983 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period. during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. This table contains some refinements in the classification of services by type of service. This was done in order to improve the comparability of the data over time. As a result of these refinements, there may be some differences in the classification of services by type of service between this table, and tables 4.4 and 4.5.

Table 5.2 — Consultation Referrals from General Practitioners for the Years Ended March 31, 1985 to 1988

Year Ending March 31	Referring Practitioner	Providing Practitioner			% Referrals Generated By General Practitioners
		Specialist	G.P.	Total	
1985	General Practice	496,182	29,423	525,605	72.8%
1986	General Practice	535,856	30,611	566,467	73.3%
1987	General Practice	580,965	31,823	612,788	74.0%
1988	General Practice	594,353	30,136	624,489	74.3%

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP) Information Base.
2. The above service data consist of fee-for-service items which the AHCIP paid to Alberta medical practitioners for services which were provided to Alberta residents during the years ended March 31. All claims for residents referred to Alberta practitioners from an out-of-province practitioner were excluded (i.e., claims must have in-province referring and providing practitioners in order to be included). The data for the year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for the service period during the 18 month period from April 1 of the particular service year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during the year.

Table 5.3(a) — Growth in the Number of Alberta Medical Practitioners for the Years Ended March 31, 1985 to 1988

	1985	1986	1987	1988	Average Annual % Growth
Total Practitioners	**3,323**	**3,460**	**3,605**	**3,769**	**4.3%**
General Practitioners	**1,907**	**2,000**	**2,056**	**2,156**	**4.2%**
Total Specialists	**1,416**	**1,460**	**1,549**	**1,613**	**4.4%**
Anaesthetists	153	154	159	167	3.0%
Dermatologists	21	22	22	23	3.1%
General Surgeons	152	151	154	159	1.5%
Urologists	35	35	36	38	2.8%
Internists	275	286	298	315	4.6%
Neurologists	25	29	29	30	6.3%
Neurological Surgeons	13	14	15	14	2.5%
Obstetricians/Gynaecologists	118	122	122	123	1.4%
Ophthalmologists	60	62	65	69	4.8%
Rhino-Otolaryngologists	30	31	31	31	1.1%
Orthopaedic Surgeons	70	71	72	81	5.0%
Pediatricians	131	139	146	145	3.4%
Psychiatrists	122	135	143	147	6.4%
Plastic Surgeons	27	29	27	30	3.6%
Physiatrists	9	9	12	12	10.1%
Thoracic Surgeons	14	13	13	15	2.3%
Emergency Medicine	N/A	N/A	20	28	N/A
Laboratory	161	158	185	186	4.9%

N/A: Not applicable

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP), Information Base.
2. The above data consist of the number of medical practitioners in Alberta for whom at least one service was paid by the AHCIP, for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during each year.

Table 5.3 (b) — Growth in the Number of Consultations per Discrete Practitioner for the Years Ended March 31, 1985 to 1988

	1985	1986	1987	1988	Average Annual % Growth
Total Practitioners	**217.3**	**223.4**	**229.7**	**223.0**	**0.9%**
General Practitioners	**20.0**	**19.9**	**20.1**	**18.2**	**–3.1%**
Total Specialists	**483.0**	**502.2**	**507.9**	**496.8**	**0.9%**
Anaesthetists	8.2	5.5	14.4	20.3	35.3%
Dermatologists	2,194.4	2,416.4	2,599.8	2,648.0	6.5%
General Surgeons	445.4	474.5	480.8	471.3	1.9%
Urologists	909.6	988.9	1,025.7	963.0	1.9%
Internists	680.7	702.5	715.7	689.4	0.4%
Neurologists	1,137.4	1,064.5	1,162.9	1,106.5	–0.9%
Neurological Surgeons	504.4	497.9	516.9	579.5	4.7%
Obstetricians/Gynaecologists	475.8	485.8	521.1	534.1	3.9%
Ophthalmologists	849.4	812.6	901.7	870.4	0.8%
Rhino-Otolaryngologists	1,627.5	1,645.5	1,757.8	1,806.4	3.5%
Orthopaedic Surgeons	900.7	971.2	994.6	896.1	–0.2%
Pediatricians	389.5	399.3	413.4	385.3	–0.4%
Psychiatrists	158.2	161.9	153.4	162.9	1.0%
Plastic Surgeons	659.0	654.6	714.9	688.5	1.5%
Physiatrists	411.7	368.7	533.5	532.4	8.9%
Thoracic Surgeons	267.6	275.2	271.6	258.7	–1.1%
Emergency Medicine	N/A	N/A	0.0	0.0	N/A
Laboratory	2.2	8.9	9.6	11.0	71.0%

N/A: Not applicable

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP), Information Base.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in Alberta, for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during each year.
4. The discrete practitioner count used in calculating the number of consultations per discrete practitioner for each specialty includes all practitioners who provided services within the specialty, and not just those who provided consultation services.

Table 5.3 (c) — Growth in the Total Number of Consultations for the Years Ended March 31, 1985 to 1988

	1985	1986	1987	1988	Average Annual % Growth
Total Practitioners	**722,088**	**773,129**	**828,093**	**840,672**	**5.2%**
General Practitioners	**38,121**	**39,855**	**41,299**	**39,264**	**1.0%**
Total Specialists	**683,967**	**733,274**	**786,794**	**801,408**	**5.4%**
Anaesthetists	1,251	850	2,284	3,383	39.3%
Dermatologists	46,082	53,160	57,195	60,905	9.7%
General Surgeons	67,705	71,642	74,048	74,931	3.4%
Urologists	31,837	34,611	36,926	36,594	4.8%
Internists	187,190	200,917	213,274	217,170	5.1%
Neurologists	28,435	30,870	33,723	33,196	5.3%
Neurological Surgeons	6,557	6,971	7,754	8,113	7.4%
Obstetricians/Gynaecologists	56,141	59,265	63,570	65,693	5.4%
Ophthalmologists	50,965	50,379	58,610	60,059	5.6%
Rhino-Otolaryngologists	48,825	51,012	54,491	55,997	4.7%
Orthopaedic Surgeons	63,048	68,957	71,609	72,588	4.8%
Pediatricians	51,029	55,502	60,362	55,867	3.1%
Psychiatrists	19,303	21,855	21,943	23,947	7.5%
Plastic Surgeons	17,793	18,983	19,303	20,654	5.1%
Physiatrists	3,705	3,318	6,402	6,389	19.9%
Thoracic Surgeons	3,746	3,578	3,531	3,881	1.2%
Emergency Medicine	N/A	N/A	0	0	N/A
Laboratory	355	1,404	1,769	2,041	79.1%

N/A: Not applicable

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP), Information Base.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in Alberta, for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during each year.

Table 5.4 — Discrete Medical Patients by Age Group in Thousands for the Years Ended March 31, 1983 to 1988

Year	Under 1	1-4	5-14	15-24	25-44	45-64	65+	Total	65+ Proportion of Total Patients
	Age Group								
1983	53.0	153.8	285.2	418.3	642.4	303.8	158.4	2,014.9	7.9%
1984	52.7	157.8	294.4	399.0	660.5	308.7	163.6	2,036.7	8.0%
1985	50.2	161.2	291.5	380.5	671.1	316.6	170.6	2,041.7	8.4%
1986	49.4	165.1	302.8	379.0	700.7	327.5	179.2	2,103.7	8.5%
1987	51.0	168.8	310.5	375.9	725.6	335.6	187.4	2,154.8	8.7%
1988	50.7	167.1	313.4	361.8	730.1	341.2	193.3	2,157.6	9.0%
Average Annual Increase	–0.9%	1.7%	1.9%	–2.9%	2.6%	2.3%	4.1%	1.4%	

Sources: Alberta Health Care Insurance Plan (AHCIP), Claims Extract File for 1982-83 data and Information Base for 1983-84 to 1987-88 data.

Note: Discrete medical patients is a count of the number of Alberta residents who receive at least one service from a medical practitioner in Alberta during the year. The data for each year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for each service period during an 18 month period from April 1 of the particular service year to September 30 of the following year.

Table 5.5 — Medical Consultations per 1,000 Insured Persons According to Age and Sex for the Years Ended March 31, 1986 to 1988

		Under 1	1-4	5-14	15-24	25-44	45-64	65+	All Age Groups
		Age Group							
Number of Consultations 1988	M	732	252	176	170	226	442	800	299
	F	607	200	168	323	424	517	704	400
	Total	672	227	172	246	323	479	746	349
Number of Consultations 1987	M	600	250	174	167	224	429	768	289
	F	481	199	168	320	416	495	671	386
	Total	542	225	171	243	318	462	714	337
Number of Consultations 1986	M	572	234	167	164	216	417	742	277
	F	468	189	162	314	404	474	637	371
	Total	521	212	164	239	308	445	683	324

Notes:

1. The above data consist of fee-for-service items which the Alberta Health Care Insurance Plan paid to medical practitioners inside and outside of Alberta during each year, for services provided to Alberta residents. The data are compiled on a date-of-payment basis.
2. Source: Alberta Health Care Insurance Plan, "Statistical Supplement" for the years ended March 31, 1986 to 1988. The data for the total of males and females have been calculated using unpublished data.

Table 5.6 — Percentage of Patients receiving Consultations and the Average Consultations per Patient for Foothills and Misericordia Hospitals, 1983 to 1987

	Foothills Hospital		Misericordia Hospital	
Year	% of Patients Receiving Consultations	Avg./Pt.	% of Patients Receiving Consultations	Avg./Pt.
1987	40.2	1.6	42.0	N/A
1986	43.4	1.6	43.0	N/A
1985	42.8	1.6	42.0	N/A
1984	43.3	1.6	42.0	N/A
1983	45.1	1.6	41.0	N/A
Avg. Annual % Change	–1.0	0	0	—

Data provided by the Foothills and Misericordia Hospitals, 1988.

Table 5.7 — Number of Consultations in Which the Referring and Providing Practitioners were in the Same Field for the Years Ending March 31, 1985 to 1988

	1985	1986	1987	1988	Average Annual %Growth
Total	**77,606**	**81,426**	**87,104**	**84,391**	**2.8%**
General Practitioners	29,423	30,611	31,823	30,136	0.8%
Anaesthetists	2	2	5	28	141.0%
Dermatologists	620	605	687	581	–2.1%
General Surgeons	1,521	1,638	1,870	1,811	6.0%
Urologists	252	283	337	296	5.5%
Internists	18,419	19,449	20,924	21,418	5.2%
Neurologists	783	878	855	814	1.3%
Neurological Surgeons	70	106	136	117	18.7%
Obstetricians/Gynaecologists	7,682	7,986	8,756	7,771	0.4%
Ophthalmologists	4,174	4,002	4,417	4,918	5.6%
Rhino-Otolaryngologists	514	421	509	429	–5.8%
Orthopaedic Surgeons	1,803	2,010	2,021	2,155	6.1%
Pediatricians	9,011	9,771	11,228	9,813	2.9%
Psychiatrists	2,639	3,105	2,918	3,310	7.8%
Plastic Surgeons	645	510	514	664	1.0%
Physiatrists	33	27	89	114	51.2%
Thoracic Surgeons	12	16	12	16	10.1%
Emergency Medicine	N/A	N/A	0	0	N/A
Laboratory	3	6	3	0	N/A

N/A: Not applicable

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP) Information Base.
2. The above service data consist of fee-for-service items which the AHCIP paid to Alberta medical practitioners for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. All claims for residents referred to Alberta practitioners from an out-of-province practitioner were excluded (i.e., claims must have in-province referring and providing practitioners in order to be included). The data for the year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for the service period during the 18 month period from April 1 of one year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during the year.

Table 5.8 — Consultation Services per Discrete Practitioner by Type of Consultation and Specialty of the Providing Practitioner for the Years Ending March 31, 1985 to 1988

	1985					1986					1987				
Specialty	**Major**	**Minor**	**Repeat**	**Other**	**Total**	**Major**	**Minor**	**Repeat**	**Other**	**Total**	**Major**	**Minor**	**Repeat**	**Other**	**Total**
Anaesthesia	5.5	2.4	—	0.2	**8.2**	3.4	1.9	0.0	0.3	**5.5**	9.5	2.2	1.9	0.7	**14.4**
Dermatology	2,016.1	139.3	38.9	0.0	**2,194.4**	2,122.2	127.0	167.1	0.0	**2,416.4**	2,471.7	66.0	62.1	0.0	**2,599.8**
General Surgery	283.9	119.4	41.3	0.8	**445.4**	306.8	124.3	42.4	1.0	**474.5**	311.2	126.5	42.1	1.1	**480.8**
General Urology	724.9	110.8	71.0	2.9	**909.6**	817.1	84.7	83.2	3.8	**988.9**	826.6	86.0	107.4	5.6	**1,025.7**
Internal Medicine	498.4	56.1	114.7	11.5	**680.7**	509.1	59.0	122.5	11.9	**702.5**	519.9	65.0	118.6	12.2	**715.7**
Neurology	916.9	99.2	107.4	13.9	**1,137.4**	846.5	111.0	86.2	20.8	**1,064.5**	926.8	129.3	92.6	14.2	**1,162.9**
Neurosurgery	364.5	8.6	131.3	0.0	**504.4**	362.9	9.6	125.5	0.0	**497.9**	368.6	8.7	139.7	0.0	**516.9**
Obstetrics-Gynaecol.	361.5	48.4	27.4	38.4	**475.8**	367.3	46.4	32.4	39.6	**485.8**	395.9	50.7	32.7	41.7	**521.1**
Ophthalmology	723.1	65.5	60.8	0.0	**849.4**	701.3	65.0	46.2	—	**812.6**	792.1	72.0	37.6	0.0	**901.7**
Rhino-Otolaryngol.	1,416.2	146.7	64.6	0.0	**1,627.5**	1,428.9	143.1	73.5	0.0	**1,645.5**	1,530.6	124.1	103.0	—	**1,757.8**
Orthopaedic Surgery	729.3	112.8	58.6	0.0	**900.7**	798.3	96.2	76.7	0.1	**971.2**	806.8	107.8	80.0	—	**994.6**
Paediatrics	312.5	21.2	48.8	7.1	**389.5**	316.7	14.8	60.8	7.0	**399.3**	328.7	15.1	61.7	8.0	**413.4**
Psychiatry	136.2	12.9	9.1	0.0	**158.2**	140.6	11.1	10.2	0.0	**161.9**	133.2	10.1	10.2	0.0	**153.4**
Plastic Surgery	362.9	263.4	32.6	0.0	**659.0**	307.8	312.0	34.7	—	**654.6**	351.1	324.8	39.0	0.0	**714.9**
Physiatry	272.1	83.3	56.2	0.0	**411.7**	237.7	68.3	62.7	0.0	**368.7**	353.0	83.1	97.4	0.0	**533.5**
Thoracic Surgery	209.3	25.1	33.1	0.0	**267.6**	214.5	37.4	23.3	0.0	**275.2**	203.5	44.2	23.9	0.0	**271.6**
Laboratory	1.3	0.8	—	0.0	**2.2**	8.4	0.5	0.0	0.0	**8.9**	8.8	0.7	—	0.0	**9.6**
Emergency Medicine	N/A	N/A	N/A	N/A	**N/A**	N/A	N/A	N/A	N/A	**N/A**	0.0	0.0	0.0	0.0	**0.0**
General Practice	17.7	0.0	0.0	2.3	**20.0**	17.7	—	0.0	2.2	**19.9**	17.7	—	0.1	2.2	**20.1**
Unknown/Other	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	**0.0**
Total	**169.3**	**23.5**	**20.4**	**4.1**	**217.3**	**173.5**	**23.1**	**22.7**	**4.2**	**223.4**	**179.7**	**23.4**	**22.4**	**4.3**	**229.7**

N/A: Not applicable

—: Non-zero value

Table 5.8 continued — Consultation Services per Discrete Practitioner by Type of Consultation and Specialty of the Providing Practitioner for the Years Ending March 31, 1985 to 1988

	1988					Average Annual Rate of Growth (1985 – 1988)				
Specialty	**Major**	**Minor**	**Repeat**	**Other**	**Total**	**Major**	**Minor**	**Repeat**	**Other**	**Total**
Anaesthesia	13.2	4.1	2.3	0.7	**20.3**	33.9%	19.5%	—	51.8%	35.3%
Dermatology	2,534.3	63.0	50.7	0.0	**2,648.0**	7.9%	–23.2%	9.2%	0.0%	6.5%
General Surgery	308.7	118.9	43.0	0.7	**471.3**	2.8%	–0.1%	1.4%	–4.4%	1.9%
General Urology	773.2	81.3	106.8	1.7	**963.0**	2.2%	–9.8%	14.6%	–16.3%	1.9%
Internal Medicine	502.8	61.3	115.4	9.9	**689.4**	0.3%	3.0%	0.2%	–4.9%	0.4%
Neurology	900.0	136.5	69.1	0.9	**1,106.5**	–0.6%	11.2%	–13.7%	–59.8%	–0.9%
Neurosurgery	408.1	8.5	162.9	0.0	**579.5**	3.8%	–0.4%	7.5%	0.0%	4.7%
Obstetrics-Gynaecology	424.1	48.7	33.5	27.9	**534.1**	5.5%	0.2%	6.9%	–10.1%	3.9%
Ophthalmology	755.7	63.0	51.7	0.0	**870.4**	1.5%	–1.3%	–5.3%	0.0%	0.8%
Rhino-Otolaryngology	1,573.7	112.4	120.2	0.1	**1,806.4**	3.6%	–8.5%	23.0%	N/A	3.5%
Orthopaedic Surgery	721.8	96.5	77.9	0.0	**896.1**	–0.3%	–5.1%	10.0%	0.0%	–0.2%
Paediatrics	311.3	13.2	55.2	5.7	**385.3**	–0.1%	–14.6%	4.2%	–7.1%	–0.4%
Psychiatry	140.7	10.5	11.7	0.0	**162.9**	1.1%	–6.6%	8.7%	0.0%	1.0%
Plastic Surgery	355.6	300.0	32.9	0.0	**688.5**	–0.7%	4.4%	0.3%	0.0%	1.5%
Physiatry	309.1	114.6	108.8	0.0	**532.4**	4.3%	11.2%	24.6%	0.0%	8.9%
Thoracic Surgery	187.1	45.5	26.2	0.0	**258.7**	–3.7%	21.9%	–7.5%	0.0%	–1.1%
Laboratory	10.0	0.9	0.0	0.0	**11.0**	97.4%	4.0%	—	0.0%	71.0%
Emergency Medicine	0.0	0.0	0.0	0.0	**0.0**	N/A	N/A	N/A	N/A	N/A
General Practice	16.1	0.0	0.3	1.8	**18.2**	–3.1%	0.0%	N/A	–7.8%	–3.1%
Unknown/Other	0.0	0.0	0.0	0.0	**0.0**	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**175.4**	**22.3**	**22.3**	**3.1**	**223.0**	**1.2%**	**–1.7%**	**3.0%**	**–8.9%**	**0.9%**

N/A: Not applicable

—: Non-zero value

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP) Information Base.
2. The above service data consist of fee-for-service items which the AHCIP paid to Alberta medical practitioners for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. The data for the year are compiled on a date-of-service basis, including claims which were paid by the AHCIP for the service period during the 18 month period from April 1 of the particular service year to September 30 of the following year.
3. The specialty of each practitioner is defined as of the date when the last service was provided during the year.
4. The discrete practitioner count for each specialty includes practitioners providing all types of service and not just those practitioners performing consultation services. The total number of discrete practitioners includes practitioners of specialties which may not have performed consultation services during the years ended March 31, 1985 to 1988.

Appendix 6: Tables — Chapter 6: Minor Surgery

Table 6.1 — Number of Services and Amounts Paid for Minor Surgery and Selected Services for the Years Ended March 31, 1985 to 1988

	1985		1986		1987		1988	
	Services	Amount Paid	Services	Amount Paid	Services	Amount Paid	Services	Amount Paid
Minor Surgery	283,158	$9,638,909	289,169	$10,186,430	287,261	$10,791,687	260,047	$10,629,481
Other Diagnostic — Skin Biopsies (K266A, K266E, K266F)	303,901	724,059	325,199	826,193	303,565	750,587	223,317	556,996
Subtotal	587,059	$10,362,968	614,368	$11,012,623	590,826	$11,542,274	483,364	$11,186,477
Miscellaneous — Tray Fees (A 60, A 61)	206,400	3,074,789	225,887	3,405,741	239,627	3,900,120	234,030	3,901,751
New Minor Surgery	793,459	$13,437,757	840,255	$14,418,364	830,453	$15,442,394	717,394	$15,088,228

Notes:

1. Source: Alberta Health Care Insurance Plan (AHCIP), Claims File.
2. The above service data consist of fee-for-service items which the AHCIP paid to medical practitioners in and out of Alberta for services which were provided to Alberta residents during the years ended March 31, 1985 to 1988. The data are compiled on a date-of-service basis, including claims which were paid by the AHCIP during the 18 month period from April of the particular service year to September 30 of the following year.
3. Effective August 1, 1987, services under benefit codes K266A, K266E and K266F, were deinsured when performed for cosmetic reasons. Prior to August 1, 1987, all services provided under these benefit codes were insured by the Plan.

Appendix 7: Tables — Chapter 7: Offices Visits

Table 7.1 — Office Visits April 1, 1988 — March 31, 1989

Category	Number of Services	% of Total
Complete Examination	902,652	9.6
Limited Examination	6,558,359	69.6
Subsequent Visits	1,966,153	20.8
Total	**9,427,164**	**100.0**

Source: Alberta Health Care Insurance Plan, Claims File. The above data consist of fee-for-service items paid to medical practitioners in Alberta for services provided to Alberta residents, compiled on a date-of-payment basis.

Table 7.2 — Office Visits April 1, 1988 — March 31, 1989

Physician	Complete Examination	Limited Examination % of total	Subsequent Visits	Total
Family/General Practitioners	63.2	92.8	78.2	86.9
Internists and subspecialists	5.9	1.4	5.3	2.7
Pediatricians	6.9	2.2	1.6	2.5
Ophthalmologists	13.4	0.3	3.3	2.2
Surgeons and Subspecialists	5.4	2.2	9.5	4.1
Obstetrician/Gynecologists	4.8	0.8	1.8	1.4
Others	0.4	0.2	0.2	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Alberta Health Care Insurance Plan, Claims File. The above data consist of fee-for-service items paid to medical practitioners in Alberta for services provided to Alberta residents, compiled on a date-of-payment basis.

Table 7.3 — Office Visits April 1, 1985 — March 31, 1989

Category	Percentage Change 1986/1985	1987/1986	1988/1987	1989/1988
Complete Examinations	–0.8	–0.5	3.6	7.6
Limited Examinations	10.0	9.2	5.1	2.4
Subsequent Visits	1.7	4.7	4.5	0.6
Total	**6.7**	**7.3**	**4.8**	**2.5**

Source: Alberta Health Care Insurance Plan, Claims File. The above data consist of fee-for-service items paid to medical practitioners in Alberta for services provided to Alberta residents, compiled on a date-of-payment basis.

Table 7.4 — Office Visits April 1, 1984 — March 31, 1989 Indexed to Year Ending 1985

Physician	Year Ending March 31 1985	1986	1987	1988	1989
Complete Examinations:					
Family/General Practitioners	1.00	0.99	0.98	0.97	0.96
Internists and Subspecialists	1.00	1.02	0.98	0.97	0.90
Pediatricians	1.00	1.08	1.13	1.16	1.17
Ophthalmologists	1.00	0.74	0.68	7.52	19.00
Surgeons and Subspecialists	1.00	0.99	0.98	0.89	0.81
Obstetrician/Gynecologists	1.00	0.96	0.91	0.91	0.88
Others	1.00	1.00	1.41	1.35	1.42
Total	**1.00**	**0.99**	**0.99**	**1.02**	**1.10**
Limited Examinations:					
Family/General Practitioners	1.00	1.10	1.21	1.27	1.31
Internists and Subspecialists	1.00	1.07	1.18	1.24	1.17
Pediatricians	1.00	1.10	1.13	1.17	1.16
Ophthalmologists	1.00	1.06	0.80	0.94	0.98
Surgeons and Subspecialists	1.00	1.09	1.06	1.07	1.00
Obstetrician/Gynecologists	1.00	1.00	0.99	1.03	1.01
Others	1.00	1.65	2.45	2.92	2.67
Total	**1.00**	**1.10**	**1.20**	**1.26**	**1.29**
Subsequent Visits:					
Family/General Practitioners	1.00	1.01	1.06	1.11	1.13
Internists and Subspecialists	1.00	1.05	1.06	1.03	0.96
Pediatricians	1.00	1.10	1.23	1.28	1.32
Ophthalmologists	1.00	1.13	1.23	1.37	1.40
Surgeons and Subspecialists	1.00	1.04	1.04	1.08	1.04
Obstetrician/Gynecologists	1.00	1.01	0.95	0.98	0.94
Others	1.00	1.39	1.59	1.42	1.26
Total	**1.00**	**1.02**	**1.07**	**1.11**	**1.12**

Source: Alberta Health Care Insurance Plan, Claims File. The above data consist of fee-for-service items paid to medical practitioners in Alberta for services provided to Alberta residents, compiled on a date-of-payment basis.

Appendix 8: Tables — Chapter 8: Manpower

Table 8.1 — Alberta Physicians by Discipline as at December 31, 1986

Discipline	Physician Numbers		Alberta	Population/Physician	
	Canada	Alberta	% Canada	Canada	Alberta
Anaesthesia	2145	152	7.1	11900	15600
Community Medicine	422	34	8.1	60450	69750
Diagnostic Radiology	1572	136	8.7	16200	17450
Internal Medicine					
General Internal Medicine	1179	109	9.2	21650	21750
Cardiology	687	41	6	37100	57850
Immunology/Allergy	149	6	4	171150	395350
Dermatology	392	21	5.4	65050	112950
Endocrinology/Metabolism	251	19	7.6	101600	124850
Gastroenterology	346	26	7.5	73700	91250
Geriatric Medicine	115	2	1.7	221750	1186000
Hematology	229	7	3.1	111350	338850
Infectious Diseases	133	13	9.8	191750	182450
Medical Oncology	178	16	9	143250	148250
Nephrology	199	17	8.5	128150	139550
Neurology	373	24	6.4	68350	98850
Respiratory Medicine	295	22	7.5	86450	107800
Rheumatology	225	15	6.7	113350	158150
Emergency Medicine	506	54	10.7	50400	43900
Laboratory Medicine					
General Pathology	406	52	12.8	62800	45600
Anatomical Pathology	485	30	6.2	52600	79050
Neuropathology	32	4	12.5	796900	593000
Medical Microbiology	122	10	8.2	209000	237200
Medical Biochemistry	80	8	10	318750	296500
Hematopathology	60	7	11.7	425000	338850
Medical Genetics	60	7	11.7	425000	338850
Nuclear Medicine	139	11	7.9	183450	215650
Obstetrics/Gynecology	1338	100	7.5	19050	23720
Pediatrics	1541	131	8.5	16500	18100
Physical Medicine/Rehab	200	9	4.5	127500	263550
Psychiatry	3038	162	5.3	8400	14650
Radiation Oncology	153	18	11.8	166650	131800
Surgery					
General Surgery	1779	115	6.5	14350	20650
Cardiovascular Surgery	161	16	9.9	158400	148250
Neurosurgery	170	14	8.2	150000	169450
Ophthalmology	860	63	7.3	29650	37650
Orthopedic Surgery	810	68	8.4	31450	34900
Otolaryngology	528	29	5.5	48300	81800
Plastic Surgery	298	25	8.4	85550	94900
Urology	458	32	7.0	55700	74150
Total Specialists	**22114**	**1625**	**7.3**	**1150**	**1450**
Family Physicians	21315	1760	8.3	1200	1350
Total Physicians	**43429**	**3385**	**7.8**	**590**	**700**

Table 8.2 — Alberta Physicians by Discipline and Function as at December 31, 1986

Discipline	Alberta Total	Not in Full Time Practice				Alberta Net
		Non-AHIC	Admin	Research	PT/Locums	
Anaesthesia	152	1	2		15	134
Community Medicine	34	34				0
Diagnostic Radiology	136		1			135
Internal Medicine						
General Internal Medicine	109				1	108
Cardiology	41		1	7		33
Immunology/Allergy	6					6
Dermatology	21					21
Endocrinology/Metabolism	19	1	2	3	1	12
Gastroenterology	26			1	1	24
Geriatric Medicine	2					2
Hematology	7					7
Infectious Diseases	13		1	2		10
Medical Oncology	16		3	1		12
Nephrology	17		3	1		13
Neurology	24					24
Respiratory Medicine	22		2	1		19
Rheumatology	15		1	1		13
Emergency Medicine	54				1	53
Laboratory Medicine						
General Pathology	52		1			51
Anatomical Pathology	30				1	29
Neuropathology	4		1			3
Medical Microbiology	10					10
Medical Biochemistry	8					8
Hematopathology	7				1	6
Medical Genetics	7	7				0
Nuclear Medicine	11					11
Obstetrics/Gynecology	100		1		4	95
Pediatrics	131		2	6	1	122
Physical Medicine/Rehab	9					9
Psychiatry	162		3		7	152
Radiation Oncology	18	18				0
Surgery						
General Surgery	115			1	1	113
Cardiovascular Surgery	16					16
Neurosurgery	14		2			12
Ophthalmology	63					63
Orthopedic Surgery	68			1		67
Otolaryngology	29				1	28
Plastic Surgery	25			1		24
Urology	32					32
Total Specialists	**1625**	**61**	**26**	**26**	**35**	**1477**
Family Physicians	1760	40	40	4	89	1587
Total Physicians	**3385**	**101**	**66**	**30**	**124**	**3064**

Table 8.3 — Geographic Distribution and Population/Physician Ratios of Specialists and Non-Specialists

	Physician Number			Population/Physician	
Community	**FP & GP**	**Specialist**	**Population**	**FP & GP**	**Specialist**
Metro Calgary	496	608	671,326	1353	1104
Metro Edmonton	551	775	785,465	1426	1014
Lethbridge	51	58	58,841	1154	1015
Red Deer	47	59	54,425	1158	922
Medicine Hat	29	27	41,804	1442	1548
Fort McMurray	21	14	34,949	1664	2496
Grande Prairie	28	12	26,471	945	2206
Camrose	12	9	12,968	1081	1441
Wetaskiwin	14	3	10,071	719	3357
Brooks	8	2	9464	1183	4732
Hinton	10		8629	863	
Edson	8	1	7323	915	7323
Taber	7		6382	912	
Drumheller	9	4	6366	707	1592
Peace River	9	1	6288	699	6288
Lacombe	7		6080	869	
Others	453	52	628,426	1387	12085
Total	**1760**	**1625**	**2,375,278**	**1350**	**1462**

Table 8.4 — Alberta Physicians by Discipline as Reported by Various Agencies and Institutions

	Alberta Physician Numbers						
	Alberta Databank		NH&W	AHCIP			
Discipline	**Total**	**Net**		**Total**	**>$20,000**	**>$40,000**	**CPSA**
Anaesthesia	152	134	146	173	149	146	151
Community Medicine	34		17				16
Diag. Radiol. & Nucl. Med.	147	146	147	149	102	89	157
Internal Medicine	293	259	320	304	262	231	314
Dermatology	21	21	20	22	22	22	20
Neurology	24	24	31	29	28	24	28
Emergency Medicine	54	53	14	23	20	20	20
Laboratory Medicine	111	107	110	49	31	27	110
Medical Genetics	7						
Obstetrics/Gynecology	100	95	125	125	117	113	118
Pediatrics	131	122	145	150	118	96	152
Physical Medicine/Rehabilitation	9	9	12	12	11	9	12
Psychiatry	162	152	156	142	121	106	156
Radiation Oncology	18		17				17
Surgery							
General Surgery	115	113	155	156	145	135	155
CV & Thoracic Surgery	16	16	16	18	18	18	15
Neurosurgery	14	12	15	15	14	13	15
Ophthalmology	63	63	66	66	61	61	66
Orthopedic Surgery	68	67	72	75	70	68	77
Otolaryngology	29	28	30	31	30	30	31
Plastic Surgery	25	24	28	28	27	26	27
Urology	32	32	34	35	32	32	34
Medical Scientist			2				
Total Specialists	**1625**	**1477**	**1678**	**1602**	**1378**	**1266**	**1691**
Family/General Practice	1760	1587	1972	2074	1793	1674	2332
Total Physicians	**3385**	**3064**	**3650**	**3676**	**3171**	**2940**	**4023**
New Registrants				174			277
Attrition				52			167
Net Increase			148	122			110

Numbers for AHCIP for year ended March 31, 1987
Others represent numbers as at December 31, 1986

Alberta Databank = Modified CMA/Royal College
NH&W = National Health and Welfare
AHCIP = Alberta Health Care Insurance Plan
CPSA = College of Physicians and Surgeons of Alberta

Table 8.5 — Comparison of Alberta Physician Numbers of Different Databases

Database	Year	1984	1985	1986	1987	1988
Total Physician Numbers						
Alberta Database 1986				3385		
NH&W		3366	3502	3650	3831	4065
CPSA			3796	4023	4033	4054
AHCIP		3353	3554	3676	3829	3905
Family/General Practitioners						
Alberta Database 1986				1760		
NH&W		1793	1892	1972	2113	2270
AHCIP		1921	2040	2074	2149	2173
CPSA				2332		
Specialists						
Alberta Database 1986				1625		
NH&W		1573	1610	1678	1718	1795
AHCIP		1432	1514	1602	1680	1732
CPSA				1691		

AHCIP Numbers April 1 to March 31, year following
Other Numbers as at December 31 of year shown

Alberta Database 1986 = Modified CMA/Royal College
NH&W = National Health and Welfare
AHCIP = Alberta Health Care Insurance Plan
CPSA = College of Physicians and Surgeons of Alberta

Appendix 9: Background Reports

1. Report of Subcommittee On Laboratory Services, March 23, 1989.
2. Utilization of Medical Services and "Walk-in Clinics," April 3, 1989.
3. Increase In Consultations in Alberta, August 1988.
4. Categorization of Medical Services, September 8, 1989.

Alberta Doctor's Digest Articles

1. "Committee's Task 'Enormous,'" by Robert C. Cooper, M.D., January/February, 1988.
2. "Physicians Can Reduce Costs," by Donald G. Young, M.D., January/February, 1989.
3. "Difficult to Justify Routine Lipid Testing," by Robert C. Cooper, M.D., January/February, 1989.
4. "Advisory Committee Looks At Consultations," by C. Bruce Hatfield, July/August 1989.

Appendix 10: List of Recommendations

Recommendations: Specific Utilization Issues

Summarized below are the recommendations from the several chapters of the Report.

2.0 Information Systems/Data Management

2.4.1 **Monitoring Committee:** A Monitoring Committee with representatives of the professional associations, the various health care stakeholder groups and Alberta Health should be established to review, count and analyze the use of all health care services. The Monitoring Committee should use the resources of its member groups in carrying out its responsibilities.

2.4.2 **Monitoring Committee's Terms of Reference:** The Terms of Reference for the Monitoring Committee recommended above should include the responsibility for developing and supporting an improved monitoring system. This system will record and measure the future use of medical care services in Alberta. In addition the Monitoring Committee should guide the redevelopment and enhancement of health care information systems in Alberta.

2.4.3 **Uniform Recording of Data:** All medical services should be counted and recorded by uniform methods in order to generate complete and comparable data. The ideal recording system will record every interaction noting each service received by each patient, from each practitioner at each service delivery point. The system should be able to cross reference each element of the interaction (see Recommendations 3.3.7, 3.3.8, 15.3.2, 15.3.4).

2.4.4 **Information Retrieval:** An efficient information retrieval system should be developed to ensure that data about health care use will be current and of good quality.

2.4.5 **Intergovernmental Cooperation:** Alberta should continue to work with the federal and other provincial governments to improve the comparability of its data monitoring with theirs.

2.4.6 **Categorization of Medical Services:** Data derived from the Alberta Health Care Insurance Plan's claims payment system should be categorized into the following seven broad categories: consultations, visits, surgery/procedures, anesthetic, diagnostic imaging, pathology and other (tray fees). This categorization is described more fully in the Advisory Committee's background report: "Categorization of Medical Services." This plan should be implemented as soon as possible (see Recommendation 13.3.3).

2.4.7 **Monitoring Categorization System:** The new system of categories will have to be maintained so that new procedures are included promptly and so that categories are applied more consistently than is the case with the current system. This task could fall to the proposed Monitoring Committee (see Recommendation 2.4.1).

2.4.8 **Linkage Pilot Project:** The Linkage Pilot Project should be continued and evaluated according to the schedule proposed by Alberta Health. The results of this pilot should be used to develop a more comprehensive system of data retrieval and linkage between the hospital sector, the various laboratory sectors and the Alberta Health Care Insurance Plan.

2.4.9 **Financial Resources:** Alberta Health should provide the necessary human and financial resources required to implement recommendations 2.4.4 to 2.4.8 within a five-year time span. The Advisory Committee acknowledges that 2.4.3 is a long-term goal; however, the committee expects that there would be significant progress towards its achievement within five years.

3.0 Diagnostic Services

A. Roles of Laboratory Sectors

3.3.1 **Definition of Roles:** The role of each laboratory sector should be delineated, although the boundaries should not be so rigid that they preclude innovative or alternative methods of delivery (see Recommendation 12.3.1).

3.3.2 **Pathology Laboratories:** The primary roles for each pathology laboratory sector should be based on its essential services (see Recommendations 3.3.1 and 12.3.1) The primary roles are summarized as follows:

Private Laboratories	Diagnostic services to non-hospital patients.
Hospitals: University Regional Urban	Diagnostic services to hospital inpatients and outpatients. Blood transfusion services.
Hospitals: Rural	Diagnostic services to hospital inpatients and outpatients.
Provincial Laboratories	Reference microbiology. Public health services.
Red Cross Blood Transfusion Service	Blood donor services. Blood transfusion services.

(For a more complete discussion of primary and secondary roles see the Report of the Subcommittee on Laboratory Services (March 23, 1989).

3.3.3 **Diagnostic Imaging Laboratories:** The respective roles of hospital and private-practice radiology facilities should be reviewed by a committee composed of representatives of Alberta Health, the Alberta Medical Association, the College of Physicians and Surgeons (Alberta), and the Alberta Hospital Association to ensure that patient care is delivered by the most appropriate facility and to determine the most effective funding mechanisms for these services (see Recommendations 3.3.1 and 12.3.1).

B. Funding of Diagnostic Services

3.3.4 **Funding System:** An equitable and complementary funding system should be developed for each diagnostic sector.

3.3.5 **Consultation Benefit for Radiologists:** The Schedule of Medical Benefits should include a consultation benefit for radiologists to compensate them for time spent in advising clinicians on imaging and other diagnostic strategies.

C. Data Management

3.3.6 **Uniform Data Gathering Methods:** Uniform counting and recording methods should be developed for all diagnostic laboratory services, including pathology, diagnostic imaging and other diagnostic services wherever they are performed (i.e., hospitals, private laboratories, offices, provincial laboratories or the Red Cross) (see Recommendation 2.4.4).

3.3.7 **Data Linked to Physicians and Patients:** All diagnostic services, however funded, should be linked to patient, physician and Alberta Health Care Insurance Plan data in a uniform manner (see Recommendation 2.4.3).

3.3.8 **Physician and Patient Profiles:** Diagnostic service data should be compiled to create individual physician and patient profiles. Such profiles could be used by the Medical Practice and Audit Committee of the College of Physicians and Surgeons (Alberta) and Alberta Health in their examination of medical practices and use of the health care system (see Recommendations 15.3.2, 15.3.3 and 15.3.4).

3.3.9 **Transfer of Patient Data:** Alberta Health, the College of Physicians and Surgeons (Alberta), the Alberta Medical Association and the Alberta Hospital Association should determine how to ensure that films and reports of all diagnostic tests will follow the patient when the patient moves to another facility or location.

D. Continued Monitoring of Utilization

3.3.10 **Monitoring Committee:** The proposed Monitoring Committee should include the monitoring of diagnostic services within its mandate. Shifts in the use of diagnostic services among private laboratories, hospital laboratories, the provincial laboratory, and the Red Cross should be detected and quantified (See Recommendations 2.4.1.).

3.3.11 **Accreditation of Pathology Laboratories:** A uniform accreditation system should apply to all four pathology laboratory sectors. The College of Physicians and Surgeons' Advisory Committee for Laboratory Accreditation and Quality Control is already responsible for accrediting all pathology laboratories in the private and hospital sectors. Their inspection and sample checking programs could be extended to include the provincial laboratories and the Red Cross Blood Transfusion Service provided each sector was represented on the advisory committee (See Recommendation 5.4.7 and 5.4.8).

E. Communication

3.3.12 **Inter-sector Pathology Committee:** An committee with representatives from each of the four pathology laboratory sectors should be appointed to advise Alberta Health on continuing developments within the entire pathology sector. This committee would assist with problem solving and communication within and among sectors.

F. Regional Hospitals Shared Laboratory Services

3.3.13 **Regional Laboratory Services:** Alberta Health should continue to implement proposals to extend shared laboratory services through regional hospitals (For a discussion see Report Of The Subcommittee On Laboratory Services, March 1989).

3.3.14 **Other Regional Services:** The concept of shared regional services between hospitals should not be limited to laboratory services but should be expanded to include other hospital services.

G. Recommendations Regarding Specific Diagnostic Services

3.3.15 **Progressive Thyroid Profile:** The progressive thyroid profile for thyroid disease screening should be adopted.

3.3.16 **Cholesterol Guidelines:** The recommendations of the 1988 Canadian Consensus Conference on cholesterol monitoring should be adopted in Alberta as guidelines for determining risk of coronary artery disease.

3.3.17 **Lipoprotein Electrophoresis:** Lipoprotein electrophoresis should no longer be used as a screening procedure for coronary artery disease. This should be replaced by the procedures recommended by the 1988 Canadian Consensus Conference.

4.0 Consultations

4.4.1 **Definitions of Consultation Categories:** Clear definitions of various consultation categories should be developed for the Schedule of Medical Benefits and a new category for preoperative consultations should be added (See Recommendation 13.3.3).

4.4.2 **Classification of Internal Medicine Services:** Services provided by specialists in internal medicine should be reclassified in the Schedule of Medical Benefits according to the subspecialist categories recognized by the Alberta College of Physicians and Surgeons (See Recommendation 13.3.3).

4.4.3 **Concurrent Fee for Family Physician and Specialist Care:** Alberta Health and the Alberta Medical Association should consider a concurrent fee for family physician and specialist care in hospital (See Recommendation 13.3.3).

4.4.4 **Monitoring Committee:** Responsibility for the monitoring of consultations should be assigned to the proposed Monitoring Committee, which will provide feedback to the medical profession on the use of consultant services. (See Recommendation 13.3.3).

4.4.5 **Continuing Medical Education:** Physicians and their associations should be encouraged to offer continuing medical education programs and articles in various publications to provide clearer guidelines for work-up of specific patient problems, including suggestions on when to obtain specialist assistance. (See Recommendations 9.4.1 and 9.4.2).

4.4.6 **Research On Consultations:** Research should be undertaken and funded into why physicians obtain consultations, the appropriateness of consultation requests, and approaches to changing the behaviour of physicians who provide excessive referrals for consultations. (See Recommendations 9.4.1 and 9.4.2).

4.4.7 **Elimination of Mandatory Consultations:** All mandatory consultations should be eliminated from the regulations under the Hospital Act .

5.0 Ambulatory Care

A. Walk-In Clinics

5.4.1 **Monitoring Committee:** Responsibility for the monitoring of primary care visits should be assigned to the proposed Monitoring Committee. Alberta Health requires the data to refine the office visit fee codes so they better reflect the time, skill and overhead required. As well, the data may help explain the reasons for the extensive use of primary care in Alberta. (See Recommendation 2.4.1.)

5.4.2 **Relationship Between Income and Use of Medical Services:** A study should be undertaken to establish the relationship between income levels and medical care use. If a significant relationship exists between income levels and health care use then appropriate strategies should be developed to improve the provision of medical care for low-income Albertans.

5.4.3 **Identification and Education of High Use Consumers:** Alberta Health should find a means to identify registrants who are high users of medical services for minor complaints and target an education campaign to these registrants. One possible approach might be for Alberta Health to identify, through AHCIP data, patients who see different physicians multiple times within a limited time period. Those registrants could be sent information about the cost of the services they have used and how to use the health care system more appropriately (See Recommendations 9.4.1 and 9.4.2).

5.4.4 **Funding Incentives:** Alberta Health should consider approaches such as the use of financial incentives and disincentives that encourage responsible use of the health care system. (See Recommendations 12.3.7, 13.3.4, 14.2.7 and 16.3.4).

B. Research of the role and use of Emergency Departments

5.4.5 **Research Role and Use of Emergency Departments:** The following issues should be examined more thoroughly:

i. Patient use of emergency departments;

ii. The role of emergency departments in all hospitals;

iii. The standards for emergency departments in all hospitals.

C. Ambulatory Care Service in Alberta

5.4.6 **Shift Inpatient Services to Ambulatory Care:** Alberta Health should encourage a shift from inpatient to ambulatory care, where clinically appropriate and economically desirable. Various models for ambulatory care delivery should be investigated.

5.4.7 **Registration of Health Facilities:** All facilities in which practitioners provide health services that are funded directly or indirectly by Alberta Health should be registered. Data required for registration should include the address, owner/operator information, names of physicians using facilities, hours of operation and any other information considered necessary by Alberta Health. This would include all physicians' offices; ambulatory care facilities and surgical centres; laboratories, including specimen collection facilities; and diagnostic radiology facilities, among others.

5.4.8 **Accreditation of Health Facilities:** A self-funding accreditation process and accreditation standards for all health facilities and services should be developed by the College of Physicians and Surgeons (Alberta) for facilities providing advanced services such as major endoscopic procedures and surgical procedures. This represents an extension of the accreditation process already carried on by the College. It would include services requiring major tray service fees, diagnostic services, and so forth.

5.4.9 **Funding of Health Services:** In order for health care professionals to be reimbursed through the AHCIP's claims process their services must be delivered in an accredited facility that has been approved by Alberta Health. Some facilities such as hospitals can be approved for a wide variety of health services, others such as vasectomy clinics would be accredited and approved for highly specific services. Approval would allow for funding which might take the form

of a comprehensive fee including professional and overhead compensation for individual services or, in some circumstances, facility fees intended to cover capital and operating costs.

D. Emergency Medical Services

5.4.10 **Report on Emergency Services in the City of Calgary:** The Advisory Committee has recommended, in a separate report to the Minister of Health, that the number of full-service emergency departments in the City of Calgary be reduced to three plus the emergency department at the Alberta Children's Hospital. A similar study of emergency departments should be undertaken for the City of Edmonton to determine the number required in that city.

5.4.11 **Urgent Care Centres:** Where emergency departments are eliminated from existing hospitals, it is recommended that such hospitals operate "urgent care centres" staffed by family physicians. These would provide for 24-hour assessment and treatment of minor and moderate illnesses. Such facilities would not receive ambulances or major trauma patients. They would be introduced with an educational campaign to ensure their role is made clear to the communities they serve.

6.0 Minor Surgery

6.4.1 **Monitoring Committee:** The proposed Monitoring Committee should analyze minor surgery in order to identify shifts in activity and the reasons for those shifts. It should make recommendations for necessary changes (See Recommendation 2.4.1.).

7.0 Office Visits

7.4.1 **Monitoring Committee:** The proposed Monitoring Committee should continue to analyze the "office visits" category according to physician groups. The committee would review shifts in activity and recommend necessary changes (See Recommendation 2.4.1).

8.0 Manpower

8.4.1 **Advisory Committee on Health Manpower Studies:** An Advisory Committee on Health Manpower Studies should be appointed and funded by the Alberta departments of Health, Career Development and Employment, and Advanced Education. The Advisory Committee would give direction to the Centre for Health Manpower Studies and would work with all health occupations in Alberta.

8.4.2 **Centre for Health Manpower Studies:** A Centre for Health Manpower Studies should be established to monitor manpower supply and develop new and accurate manpower measurements. The Centre would also determine factors influencing manpower shifts, and examine worker productivity. It could provide independent statistical and data base services to all health disciplines.

8.4.3 **Manpower Target Committees:** Alberta Health, in consultation with stakeholder groups should establish a committee for each health discipline. These committees would help establish and achieve manpower targets. They should be composed of a mix of individuals from government, health disciplines, the educational institutes, and the principal employer groups. Compensation issues will be outside of their mandates.

8.4.4 **Re-examine Relationship Between Physician Manpower and Use of Health Care Services:** The notion that increased use of services is due largely to increased physician numbers should be re-examined in the light of diverging trends in the two issues during the last two fiscal years. Physician numbers and utilization should be examined according to each subspecialty or disciplinary group, rather than using aggregate data.

8.4.5 **No Action on Physician Supply:** Since the cause-and-effect relationship between physician manpower and health care use has not been established no new action should be taken to limit physician supply or to control billing numbers.

8.4.6 **Rural Alberta:** The medical profession, medical schools, and governments should continue to study the needs of rural Alberta and recommend actions to help ensure that Alberta citizens receive cost-effective, high-quality health care in a timely fashion regardless of their geographic location. Special attention should be paid to the problem of transportation and communication between urban and rural Alberta (See Recommendation 12.3.10).

9.0 Communication

9.4.1 **Communications And Community Advisory Committee:** A permanent public education committee, the Communications and Community Advisory Committee, should be established. This committee would have broad representation from associations representing hospitals, health units, health professionals and consumers. It should report to the Minister of Health.

The Communications and Community Advisory Committee should be a working and coordinating body. It should provide a focus for and be an advocate for good health and community involvement, as well as being a source of reliable health information. It should identify and analyze health trends. It should advise on and monitor health promotion campaigns, create greater public awareness of health costs and encourage appropriate use of health services.

The Communications and Community Advisory Committee should have a close working relationship with the Monitoring Committee; the latter would be the principal source of information about utilization patterns and trends. (See Recommendation 2.4.1).

Educational activities be provided through professional associations, through hospital, health unit, and family and community support services associations; and through special interest and support groups.

9.4.2 **Terms of Reference:** The proposed Communications and Community Advisory Committee might adopt the following within their Terms of Reference:

i. organize a speakers' bureau to provide qualified speakers and printed support material; bureau staff may assist with presentations for events such as health fairs, forums, and health promotion activities;

ii. increase public and professional awareness by developing programs that emphasize alternatives to hospitalization and the reduction of hospital stays;

iii. collaborate with appropriate professional associations to provide information about use and efficiency of health care services;

iv. publish regular columns and articles on health care utilization and cost efficiency in professional journals;

v. encourage feature writers, columnists, editorialists as well as science and medical writers to give informed analysis of utilization issues;

vi. support the inclusion of cost effectiveness and utilization issues in health-related conferences, seminars and workshops;

vii. encourage teaching facilities for health professionals to expand their curricula to include content on cost effectiveness and utilization.

viii. distribute a practitioners' profile, in an easy-to-read format, to all insured health care practitioners on a regular basis.

ix. develop and distribute a registrants' profile, in an easy-to-read format, to Alberta consumers who display unusual usage patterns.

x. carry out market and behavioral research into consumer choices relating to life-style and the use of health resources.

xi. carry our research into communication and education techniques.

9.4.3 **Funding:** The Communications and Community Advisory Committee will require sufficient resources to carry out its responsibilities effectively.

Recommendations: Barriers to Cost Effective Health Care

11.0 Mission, Goals and Objectives for Alberta's Health Care System

11.5.1 **Biannual Conferences on Goals and Objectives:** The Minister of Health should sponsor biannual conferences, jointly organized by the Universities of Alberta and Calgary, together with stakeholder groups, on health goals and objectives. The purpose of these conferences would be to develop a mission, goals, and objectives for Alberta's health system and to review progress in their achievement.

11.5.2 **Conference Organizing Committee:** The organizing committee appointed for each conference should be made up of representatives from Alberta Health and the universities to develop background material, organize the conference format, issue invitations to stakeholder groups, and make conference arrangements (see Recommendation 11.5.1).

11.5.3 **First Conference Agenda:** The first conference would address itself to the mission, goals, objectives, and principles for health care in Alberta proposed by the Premier's Commission on the Future of Health Care for Albertans and the Advisory Committee on the Utilization of Medical Services. The objective of the two- to three-day conference would be to achieve consensus on a mission and goals for Alberta's health care system and to develop a strategy for identifying specific objectives and health status targets. Future conferences would refine the mission, goals and objectives, review their relevancy, and monitor progress in achievement (see Recommendation 11.5.1).

11.5.4 **Provincial Plan for Health Care:** Based on the mission, goals and objectives for the health care, Alberta Health in consultation with the stakeholder groups should develop a provincial plan for health care (see Recommendation 11.5.1).

11.5.5 **Development of Planning Tools:** Alberta Health should develop the planning and management processes required to achieve the goals and objectives. As well, the department should review legislation, regulations and policy to ensure consistency with the overall goals of the health care system. Other stakeholders should be urged to adopt and implement the results of the conferences (see Recommendation 11.5.4).

11.5.6 **Area Health Planning Councils:** Area Health Planning Councils should be established for geographical areas throughout the province. Councils should include representatives of acute care, long term care, home care, public health, and practitioners. The councils should be funded by and accountable to their representative organizations. They would be responsible for setting health goals at a local level, consistent with those determined for the province as a whole (see Recommendation 14.2.3).

11.5.7 **Intergovernmental Cooperation:** Alberta should work with other provincial governments and the federal government to develop a consistent approach to health policy on a national and interprovincial level.

12.0 Institutional Funding System

12.3.1 **Role Statements:** Each institution should have its role and scope of services explicitly defined. The role of each institution in a region should complement the roles of other health facilities. As well the role of the institutional sector should complement the other health care sectors. Institutions with similar roles and scope of services should be grouped so that similar funding standards can be applied. Funding for new initiatives should only be provided on a trial basis after a formal review. Funding may be made permanent after a formal evaluation of the initiative is carried out (see Recommendations 11.5.4, 11.5.5, 16.3.1 and 16.3.2).

12.3.2 **Standards for Fixed and Variable Costs:** For each type of institution, funding standards should be developed for fixed and variable costs. Fixed costs, covering infrastructure and overhead, would include such services as physical plant operations and administration. Variable cost standards would be set on a unit-of-care basis and include inpatient admissions, day surgery, other outpatient visits, and long term care patient days. Casemix and severity measures should be built into the calculation of variable rates. Cost standards should include some flexibility for unique institutional features such as building age, provided that exceptions are explicitly identified in funding rate decisions (see Recommendations 12.3.8 and 14.2.10).

12.3.3 **Volume Contracts:** Each institution should annually contract with Alberta Health the minimum and maximum volumes for inpatient stays, day surgery visits, outpatient visits, long term care patient days, etc. Semi-monthly payments should be prospectively calculated at the middle of the volume range for variable items. A year-end reconciliation process should result in additional funds to the institution if the mid-range volume target for these variable items is exceeded. Hospitals that exceed maximum volumes should not be guaranteed additional funding. If such is provided, the variable rate of payment should be reduced. If the hospital's volumes were less than the middle of the volume range, funds would be returned to Alberta Health. If an institution's volumes fall below the minimum or exceed the maximum targets, a role review should be undertaken in the base review fiscal year (see Recommendation 12.3.2).

12.3.4 **Disclosure of Calculations:** The calculation of fixed and variable costs along with the notation of exceptions should be explicitly identified in all rate decisions. This information should be provided to institutional boards and administrators so they can ascertain how funding was provided. All rate decisions should be public so that institutions can determine if they were treated in a similar manner to like institutions. The funding system should be supported by a budget manual describing the budgeting process, hospital groupings and standards for fixed and variable costs, etc. (see Recommendation 12.3.2).

12.3.5 **Funding for Unapproved Programs:** All new programs or new services must be formally approved in writing before funding is granted. Verbal or informal approvals should be strictly prohibited on the part of both institutions and Alberta Health. Programs or services initiated without a formal written approval should not be funded for capital or operating costs and institutions which initiate such programs should be subject to penalties. However, to preserve a measure of local autonomy, institutions should be able to operate programs and services for which Alberta Health does not grant funding, provided they do not result in spin-off costs (see Recommendation 16.3.4).

12.3.6 **Treatment of Surpluses and Deficits:** Any deficits, should remain the responsibility of the institution's board and should not be funded by the province. On the other hand, all surpluses should also remain with the institution's board, provided that volume targets have been met and surpluses were achieved through operating efficiencies. This will ensure that efficient institutions are not financially penalized for generating a surplus by having their budget reduced in subsequent years unless there has been a rate change.

12.3.7 **Incentives in Funding Rates:** Programs such as day surgery should be separately funded at rates designed to encourage a shift in care from an inpatient to an outpatient setting. If the basis for inpatient funding is shifted from patient-days to the number of inpatient stays, institutions will have an incentive to reduce average length of stay and place patients in other settings for after-care. The funding rules should specifically provide that institutions may purchase home care services from home care authorities as part of early discharge planning programs. Hospitals should be permitted to develop specialized home care programs in cooperation with local authorities, using existing funds for unique home services such as parenteral therapy. The proposed Monitoring Committee should monitor short-stay admissions to ensure that patients who could be treated on an outpatient or day surgery basis are not admitted to hospital to increase volumes rather than legitimate patient-care reasons (see Recommendation 2.4.1). Hospitals engaging in such practices should be subject to predetermined penalties. Alternatives to inpatient care should be approved and funded in a way that encourages transfer of funds from inpatient to outpatient programs so that such programs do not become "add-ons" (see Recommendations 5.4.4 and 16.3.4).

12.3.8 **Severity and Casemix Funding:** Specific variable funding rates should be developed for patients admitted to approved open heart surgery, end stage renal disease, total parenteral nutrition, pacemaker, chemotherapy, perinatal/neonatal, burn treatment, transplant and intracranial neurosurgery programs. This would partially compensate for severity and casemix for these specialized services. The variable costs for these services should be standardized. As there are a limited number of such approved programs, the negotiation of these variable costs ought to be straight forward (see Recommendation 14.2.10).

12.3.9 **Inter-hospital Billing:** Inter-hospital billing should be re-instated so that institutions that purchase services on behalf of patients are required to pay the cost of those services. Laboratory services, for example, could be purchased either from regional hospitals or from private laboratories. Rates should be determined through negotiation between the purchasing and the providing agency to promote an element of competition. This would allow purchasers to seek the best rate and service possible.

12.3.10 **Patient Transportation:** In order to promote prompt transfer where appropriate, patient transportation to and from other centres should be fully funded as a separate budget item and subject to year end reconciliation. A system must be designed, however, to ensure that such transfers are appropriate. Funding ought not to be an impediment to transfer of patients between institutions where more sophisticated forms of care are required or, conversely, when patients can be returned to their own community for care at less cost (see Recommendation 8.4.6).

12.3.11 **Technology Acquisition and Assessment Fund:** A fund should be established to allow Alberta institutions to acquire contemporary technology in a timely fashion and provide a mechanism for assessing the efficacy and economy of that technology. Where new technology becomes available, Alberta Health should be in a position to provide capital and operating funding on a limited-term, pilot-project basis, to a limited number of sites. Each technology assessment pilot should be contracted to a receiving institution, which in return for the operating and capital funding, agrees to conduct a formal technology assessment. This assessment would provide information on the efficacy and safety of the technology, its potential for use in other centres, and protocols for use (see Recommendation 19.5.5).

12.3.12 **Base Budget Reviews:** Every three to five years, Alberta Health and the institutions should formally review the funding standards and the fixed and variable rates. Such base reviews should consider technological change, service population changes and other factors for the hospital system as a whole and then for individual hospitals. They would determine whether or not significant events have occurred to institutional rates; standards would be adjusted as necessary. As part of the base review process, forecast (but not guaranteed) percentage adjustments should be made based on economic trends in the province to allow institutions to plan their activities in subsequent years.

12.3.13 **Other Health Care Sectors:** The funding systems for the long term care, home care, and community care sectors, as well as the practitioner funding system should also be reviewed to ensure that they complement each other (see Chapter 13). Negative features in the funding mechanisms for other components of the health care system are likely and these should also be addressed and corrected.

13.0 Practitioner Payment System

13.3.1. **Task Force On Practitioner Payment:** A task force or committee should be established to investigate alternative payment approaches, including fee-for-service, sessional fees, salaries and capitation. The task force would be made up of representatives from the College of Physicians and Surgeons (Alberta), the Alberta Medical Association, the Alberta Hospital Association, and Alberta Health. The task force would focus on systems rather than individual items or fees, and would make recommendations to the Minister of Health.

13.3.2 **Analysis of Relative Value:** Relative value systems should be seriously studied as an approach to fee setting.

13.3.3 **Review of Schedule of Medical Benefits:** The Alberta Health Care Insurance Plan and the Alberta Medical Association should undertake a complete review of the present Schedule of Medical Benefits: recategorizing benefits; examining individual items and eliminating those with little patient benefit; and adjusting fees where technological change has resulted in current fees being either too high or too low (see Recommendation 2.4.6).

13.3.4 **Incentives for Least-Cost Care:** The review of the Schedule of Medical Benefits should include consideration of a system of differential fees for provision of services in different settings. Such a system would contain incentives to shift care to the least costly setting (see Recommendation 5.4.4).

13.3.5 **Consultation Benefits:** The review of the Schedule of Medical Benefits should include consideration of a consultation benefit to physicians when appropriate referrals for services are made by non-physician health-care practitioners.

14.0 Organization of Health Services Programs for Cost Effectiveness

14.2.1 **Inter-departmental Co-ordination:** The Alberta government should develop a mechanism to ensure interdepartmental co-ordination on issues that affect the health of Albertans. This could take the form of an interdepartmental policy analysis group responsible for examining the health impacts of actions from a variety of departments such as Social Services, Municipal Affairs, Transportation, Environment, Education and Transportation. Such a group could provide advice on the health impact of public policy initiatives and help avoid some of the unforeseen and unfortunate health consequences of legislative, regulatory and budgetary actions. This group's success would depend on the existence of government-wide, clearly articulated health goals and objectives.

14.2.2 **Regional/Local Co-ordination:** Co-ordination should be extended beyond the provincial government to regional and local levels. Methods of linking or unifying acute care, long term care, public health, social services, and other programs should be tested. At a minimum, local and regional authorities need to find ways to complement proposed linkages at the provincial level (see Recommendation 16.3.5).

14.2.3 **Area Health Planning Councils:** Area Health Planning Councils should coordinate planning and policy development, program implementation, and program review in concert with regionally established health goals and objectives. (See Chapter 11, "Goals and Objectives," 11.1.5.) Councils may wish to consider initiatives such as Ontario's proposal for regional health program coordinators who would help develop priorities and plan for health care needs that cut across community, institutional, and personal delivery systems. These regional goals would be consistent with overall provincial health goals and objectives (see Recommendation 11.5.6).

14.2.4 **Community Care as Entry Point:** Home care programs should become the entry point to the long term care system. This would create a community-based bias instead of an institutional bias for long term care. The single-point-of-entry system should be designed to encourage care at the lowest possible level and should be complemented by an educational strategy designed to increase public awareness of community care alternatives (see Recommendation 16.3.5).

14.2.5 **Home-Based Care:** Alberta Health should investigate the development of systems to provide medical supplies, drugs, and nutrients in the home, rather than in institutions, as a means of supporting and encouraging a shift from institutional to community-based care. Programs such as New Brunswick's Extramural Hospital, as well as Extended Health Benefits and Blue Cross coverage for such services provided on a community basis should be considered, along with other models that may be identified.

14.2.6 **Respite Care:** In addition to community-based forms of care, alternatives such as day hospitals and respite care should be examined urgently as a means of providing support to individuals who need care but now live in the community. These measures, along with emergency response teams as proposed in the Mirosh Report,[14] would go a long way to avoiding unnecessary "social" admissions to acute care facilities with their attendant expense and risk of functional deterioration.

14.2.7 **Incentives for Early Discharge:** Institutional funding should include incentives to encourage early discharge of patients to less costly settings where care of equal quality can be provided (see Recommendation 5.4.4).

14.2.8 **Individual Support:** To the extent possible, all programs should consider the unique needs of each patient and their families. For example, income support so that a spouse can hire care givers for brief periods might provide adequate care and supervision for dependent patients at less cost than existing home care mechanisms (see Recommendation 12.2.13).

14.2.9 **Funding System:** Incentives must be developed in funding systems for all health care services providers to plan jointly and organize services in a way that reduces unnecessary duplication and results in comprehensive services (see Recommendation 12.2.13).

14.2.10 **Multi-Problem Patients:** Comprehensive care approaches should be examined for patients with multiple medical and social problems, particularly in rural areas. The coordination of medical, mental health and social services often needed by multi-problem patients is frequently so burdensome that it does not get done. At the present time, the practitioner payment system and the lack of a single-point-of-entry and/or social work resources do not permit the development of comprehensive strategies to address social, emotional, housing, and medical needs of patients (see Recommendation 12.3.8).

14.2.11 **Funding Community-Based Care:** New initiatives in community-based care should be developed so that they are not "add-ons." Many of the measures proposed will only be of value if they represent alternatives to acute care hospitals, so that funds are transferred from this sector (see Recommendation 12.2.13).

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[14] *A New Vision For Long Term Care: Meeting The Need*, Alberta Legislature, February 1988.

15.0 Health Care Information Systems

15.3.1 **Strategic Plan:** Alberta Health, in consultation with health care providers and agencies, should develop a strategic plan and principles for development of health information systems and data bases in Alberta. Such a plan should identify principles to be incorporated in any health-related information systems as they are developed or redeveloped. The plan should be reviewed at regular intervals to determine continuing relevancy, technological feasibility, and cost (see Recommendation 11.5.4).

15.3.2 **Patient Identifiers:** Alberta Health should investigate and implement a system of unique patient identifiers in order that the provision of any service in any sector of the health care system can be related to an individual patient (see Recommendation 2.4.3).

15.3.3 **Practitioner Identifiers:** Practitioner identification codes and location codes should be collected in association with patient identifiers for services regardless of the sector of the health care system in which they occur (see Recommendation 2.4.3).

15.3.4 **Flexibility of Analysis:** Information systems should be designed to permit information to be analyzed on a patient-specific, practitioner-specific or agency/institution-specific basis (see Recommendation 2.4.3).

15.3.5 **Confidentiality:** Safeguards to protect the confidentiality of patient information must be developed in association with health information systems. However, such safeguards should not be so restrictive that they prevent the use of data bases for legitimate purposes such as health research, utilization monitoring, and policy or program planning purposes.

15.3.6 **Detecting Service Duplication:** Alberta Health should investigate the feasibility of an information system that permits physicians and other practitioners to determine whether tests or services have been provided in the recent past and the location of those results. This would help avoid unnecessary duplication and permit practitioners to detect phenomena such as doctor shopping, drug abuse, child abuse, Munchausen's syndrome, etc. This could be accomplished either through an information system network or a revised AHCIP card using "smart card" technology.

15.3.7 **Epidemiological Data Base:** Data collected by practitioners, hospitals and the other health care providers should include enough diagnostic information to permit the development of comprehensive data bases for epidemiological purposes. In particular reporting of communicable diseases should be emphasized, including existing notifiable diseases. Linkage of such information together with Vital Statistics, Medical Examiner, and disease registry data bases should be encouraged where possible to permit a comprehensive view of the health status of Albertans.

15.3.8 **Health Status Surveys:** Regular health status surveys should be undertaken.

15.3.9 **Health Status Targets:** The various data bases and information collected should be used as a basis for developing health status targets and determining the health system's success in achieving such targets (see Recommendation 11.5.4).

16.0 Institutional and Professional Cooperation

16.3.1 **Provincial Plan for Health Care:** The Provincial Plan which is linked to the mission, goals and objectives for the health care system should outline the roles and responsibilities of all service providers in the province and propose approaches to linkage and networking of such programs and services (see Recommendation 11.5.4)

16.3.2 **Role Definitions for Institutions:** Within the context of the provincial plan, the role of all institutions should be explicitly defined in terms of programs and services. Such role definitions may be provided by Alberta Health or by the proposed Area Health Planning Councils (see Recommendations 11.5.4, 12.3.1, and 16.3.1).

16.3.3 **Role Stability:** Once defined, roles for institutional providers should not be altered except with formal approval from Alberta Health. Institutions should be penalized for initiating new programs without prior departmental approval. Such an approval process would involve a uniform approach to determining need. Consideration would include consistency with the institution's predetermined role; the initiative's fit with existing services in a region and with government priorities; and cost-effectiveness of the setting (see Recommendation 16.3.1 and 16.3.2).

16.3.4 **Financial Approval for Initiatives:** New program initiatives should be approved for an initial term only. Permanent funding should only be approved after the results of a comprehensive evaluation have been completed and considered (see Recommendation 12.3.5).

16.3.5 **Improving Regional/Local Co-Ordination:** Mechanisms should be developed to improve the effectiveness of regional or local planning. Ideally, local planning authorities would be provided with resources, including staff and access to health services data bases, in order to make informed decisions on program priorities. To ensure accountability, such planning authorities should be funded by health organizations in their region rather than directly by government (see Recommendation 14.2.2).

16.3.6 **Inter-Professional Co-Ordination:** Multidisciplinary approaches to patient care and teamwork should be encouraged. The Alberta Hospital Association, the Alberta Medical Association, the Alberta Association of Registered Nurses and Alberta Health should be encouraged to work with other health disciplines so that the skills and resources of various practitioners are used to best advantage. The disciplines should also work on improving inter-disciplinary communication and co-ordination of services.

16.3.7 **Alternatives to Physician-Provided Services:** Since many patient needs could be better met at lower cost through services provided by other disciplines, Alberta Health should explore alternatives to physician-provided care. The department should consider covering the cost of services provided by nurse practitioners, social workers, nutritionists, and other health professionals working in private practice settings in association with physicians.

16.3.8 **Physician Compensation:** The Alberta Health Care Insurance Plan and the Alberta Medical Association should examine the feasibility of compensating physicians for time spent in activities such as team co-ordination and patient care team conferences.

17.3 Health Care Regulations

17.3.1 **Review of Existing Legislation:** Alberta Health, after consultation with stakeholder groups, should review all legislation including acts and regulations of other departments. The intent would be to eliminate any regulations no longer relevant and amend those that lead to utilization without benefit. Such action should be based on current knowledge and research regarding effectiveness of medical services.

17.3.2 **Staff By-Law Review:** Alberta Health, the Alberta Medical Association, the College of Physicians and Surgeons (Alberta) and the Alberta Hospital Association should review "Model Medical Staff By-laws." By-laws should include mechanisms and systems to review use of hospital services and exercise control where necessary.

17.3.3 **Review of Medical Services:** The Alberta Hospital Association, College of Physicians and Surgeons (Alberta), and the Alberta Medical Association should develop model approaches to review the use of medical services under revised medical staff by-laws.

17.3.4 **Incentives for Non-Institutional Care:** Any provincial regulations which detract from the placement of patients in the most cost-effective setting for clinical care should be eliminated. Funding should be provided for in-home use of nutrients, drugs, and other medical supplies as a means of supporting alternatives to institutional care (see Recommendations 5.4.4 and 18.4.5).

17.3.5 **Maintenance of Standards of Care:** Increased assistance should be provided to the College of Physicians and Surgeons (Alberta) to investigate and discipline physicians who do not meet the standard of care reflected in the fees provided in the Schedule of Medical Benefits.

17.3.6 **Malpractice Education:** In order to avoid the costs of diagnostic tests done solely as a defense against litigation, Alberta Health, the Alberta Medical Association, and the Legal Education Society of Alberta should develop an educational program for physicians on the nature of medical malpractice. Litigation may be avoided by providing a high standard of care (see Recommendations 9.4.1 and 9.4.2).

17.3.7 **Regulation of Private Laboratories:** Alberta Health should examine the need to regulate private laboratories (including specimen collection facilities and radiology facilities) and make recommendations to ensure appropriate use of these facilities (see Recommendations 5.4.7 and 5.4.8).

18.0 Consumer Behaviour

18.4.1 **Consumer Education:** Alberta Health should develop consumer education programs about the appropriate use of the health care system. Intensive efforts should be directed at teaching people about self care for minor illnesses, including simple decision rules as to when to seek medical attention (see Recommendations 9.4.1 and 9.4.2).

18.4.2 **Early Education:** As many health-damaging habits are hard to change in adults, considerable emphasis should be placed in educating primary and secondary school children regarding health, healthy lifestyle choices, and self care. High quality curriculum units must be developed and integrated into the education system (see Recommendations 9.4.1 and 9.4.2).

18.4.3 **Regulate Advertising:** The Government of Alberta should investigate strategies to prohibit advertising by drug companies and other manufacturers directly to the public for products or services that are only obtainable through a physician.

18.4.4 **Deinsure Unnecessary Services:** Claims for visits to physicians for services that are not medically necessary, such as to obtain a prescription for treatment of male pattern baldness, should be disallowed and should be the responsibility of the patient. Costs associated with hospital care for items recently removed from the Schedule of Medical Benefits as being not medically necessary (such as cosmetic surgery) should become the responsibility of the patient (see Recommendation 18.4.10).

18.4.5 **Alternative to Institutional Care:** As noted elsewhere in our report, there needs to be a concerted investigation of alternatives to institutional care such as quick response teams, respite care programs, home care, day care services and the like as a means of providing alternatives to institutional care. Strategies to avoid hospital admission should be implemented (see Recommendations 12.2.3, 14.2.5, 14.2.6, 14.2.8, 14.2.9 and 18.4.6).

18.4.6 **Incentives for Family Care:** Tax-related incentives to encourage families to look after dependent family members rather than relying on public resources should be investigated. In the long run, carefully structured tax incentives will cost considerably less than publicly funded treatment programs and will be consistent with the Alberta Government's social policy statement.

18.4.7 **Substance Abuse:** Funding should be expanded for the early identification and treatment of alcohol and substance abuse. As well, legislative activity directed at eliminating smoking should be encouraged.

18.4.8 **Family Violence:** The provision of resources to detect and deal with family violence should be an urgent priority because of the long term associated social and health care costs.

18.4.9 **Identification of High-Use Patients:** The Alberta Health Care Insurance Plan should develop a process for identifying registrants who are high users of medical services for minor complaints and target an education strategy to this group (see Recommendation 5.4.3).

18.4.10 **Consumer Accountability:** The lack of accountability and the absence of financial disincentives for inappropriate consumer use of medical services contribute to excessive health care costs. Approaches to encourage more appropriate patient use should be investigated. These could include:

i. Determination of individual and family AHCIP premiums on the basis of the previous year's utilization, similar to the approach used for other types of insurance;

ii. Taxing back to individuals a portion of the cost paid on their behalf by AHCIP for health care services;

iii. Deletion of items from the Schedule of Medical Benefits and the Hospitalization Benefits Plan which are not medically necessary (see Recommendation 18.4.4).

iv. Establishment of a claims review panel, including professional and consumer representatives, to review AHCIP claims submitted on behalf of patients. The panel would determine whether such visits were unnecessary and provide a mechanism for AHCIP to recover cost of fees paid to physicians for unnecessary patient-generated services.

19.0 Health Care Evaluation and Research

19.5.1 **Health Services Research Agency:** A health services research agency similar to the Alberta Heritage Foundation for Medical Research should be created. This could serve as an advocate for health services research and as a granting agency. Its first priority would be to create an awareness of the need and importance of health care research.

19.5.2 **University Funding:** The Universities of Alberta and Calgary should receive direct funding for the creation of multidisciplinary health services research units. These would serve as a focus for the development of a critical mass of expertise in this area. They would provide training and role models for students.

19.5.3 **Funding Health Care Research:** Alberta should devote at least one per cent of its annual public expenditures on health care to health care evaluation and research. Such funding should be redirected from existing expenditures to the Health Services Research Agency. In addition to funding health policy research units, the funding agency should make monies available to individuals and institutions. Money would be allocated using a formal application and peer review process similar to that used by the Medical Research Council of Canada, Alberta Heritage Foundation for Medical Research, and the National Health Research and Development Program.

19.5.4 **Research by Smaller Institutions:** The funding agency should encourage smaller institutions and programs, not traditionally involved in research activities, to plan and develop research programs. This would allow them to gain familiarity with the research process and to conduct research designed to meet their specific needs.

19.5.5 **Policy on New Technology:** Alberta Health should institute a policy that technology new to the province will be introduced only at a limited number of sites. It will not be extended to other institutions until the completion of evaluations (see Recommendation 12.3.1).

19.5.6 **Permanent Funding for Programs:** Permanent funding should be put into place for new programs only after a formal evaluation of such programs has been completed (see Recommendation 16.3.4).

19.5.7 **Research-Policy Integration:** Every effort should be made to integrate research findings into the government policy process. Findings should also be made widely available for application in institutions and programs in management and clinical care.

Appendix 11: Index of Recommendations

Regulation:

3.3.11 Accreditation of Pathology Laboratories.

5.4.7 Registration of Health Facilities: 5.3.9.

5.4.8 Accreditation of Health Facilities.

17.3.1 Review of Existing Legislation.

17.3.2 Staff By-Law Review.

17.3.3 Review of Medical Services.

17.3.4 Incentives for Non-Institutional Care.

17.3.5 Maintenance of Standards of Care (College of Physicians and Surgeons)

17.3.7 Regulation of Private Laboratories.

18.4.3 Regulate Advertising.

Research:

4.4.6 Research on Consultations.

5.4.2 Relationship between Income and Use of Medical Services.

5.4.5 Research on the Role and Use of Emergency Departments: 5.3.6.

8.4.4 Re-examine the Relationship between Physician Manpower and Use of Health Care Services: 8.2.3, 8.3.7, 8.3.13, 8.3.21.

8.4.6 Rural Alberta: 8.3.14.

19.5.1 Health Services Research Agency: 19.5.3 Funding Health Care Research.

19.5.2 University Funding.

19.5.4 Research by Smaller Institutions.

19.5.7 Research-Policy Integration.

November 1989/5M